

THE CULTIVATOR.

THIRD

To Improve the Soil and the Mind.

SERIES.

VOL. II.

ALBANY, JUNE, 1854.

No. VI.

Foreign Correspondence.

LEIPSIK, SAXONY, February, 1854.

MESSRS. EDITORS—Within an hour's walk of Leipzig, near the village of Moeckern, is situated an *Agricultural Experiment-Station*, some account of which may be acceptable to your readers. About three years since the Leipzig Economical Society came into possession of a farm of some 120 English acres, and with the co-operation of the Leipzig and Chemist's Agricultural Society, determined to establish it as an Experimental Farm. Application to government was followed by legalization of the institution, and an annual appropriation for its support; and finally, certain funds which had been raised by the "Union of the German land and forest lords," for erecting a monument to the great THAER,* and which remained after the completion of the same, were applied as a Thaer foundation to assist in promoting this useful object. The great utility of such establishments, and the hope that the organization of similar ones in the United States may be encouraged by an account of this, induces me to annex a translation of the important features of the statute relating thereto, and approved by the Saxon government about a year since.

"Under the title 'Ag. Experiment Station, upon the farm of the Leipzig Ec. Society, and the adjoining lands of Dr. Crusius,' is founded an institution to be devoted to the advancement of agriculture by means of scientific investigations carried on in close connection with practical experiment. This object shall be promoted by the co-operation of a practical farmer and a man of science. The investigations and experiments they shall institute, shall be mainly directed to the following particulars:—

"1. The growth of plants—the conditions affecting it generally; and in particular, the influence of the constituents of the atmosphere, of the soil, of manures, and of the preparation of the soil upon it; and also, the various hindrances to vegetable development.

"2. The ingredients of plants and their action on the animal organism. The various kinds of feed, their

composition and their valuation for the production of flesh, milk, wool, &c.

"3. Meteorological observations.

"4. The cultivation of plants here little known, and the determination of their value.

"5. Testing of ag. implements and machines.

"6. The construction of authentic tables of comparative numbers, having reference to all branches of agriculture, as for example, tables of the relative value of feed.

"The conduct of these investigations is under the care of a practical farmer, and of a scientific man, and the institution falls therefore into two divisions—that of *practical agriculture* and that of *natural science*.

"The establishment is to be controlled by a Board of Directors, now composed of six members, viz: representatives of the three societies that contribute to its support, one of whom is Prof. STOCKHARDT—of Dr. CRUCIUS, a noted agriculturist and friend of the enterprise—of Dr. WOLFF, director of the scientific, and M. BAEHR director of the practical department. Persons or parties contributing \$75 may be represented in the Board.

"The directors of the practical and scientific departments are entitled to one vote each, and the other members to one vote for each \$75 contributed by them or the society they represent."

Following the above regulations is an extended list of experimental investigations to be carried out during the year 1853. Already two extended reports have been published, embodying very valuable results obtained at this Station. At present the farm has hardly recovered from the neglect of its former proprietor, and with the exception of some fine stock, both of native and foreign breeds, a fair selection of improved implements and the promise of good things to come, presents no feature that may detain us from noticing the scientific department. Lying low and being well watered, the farm has more space devoted to meadow than is usual here. It supports 20 cows, whose milk is daily sold in Leipzig. Only small portions have been thorough-drained; these have been perceptibly improved.

In the scientific department there is little to attract the casual eye. A simply furnished laboratory, and instruments for meteorological observations, nearly

* In a conspicuous position upon the public promenade of Leipzig, stands a colossal bronze statue of Thaer, mounted on a marble pedestal, which bears an inscription to this effect—"To their honored teacher, ALBRECHT THAER. The landlords of Germany, 1850."

completes the list. It is only by studying the reports of the investigations that have emanated from it,—only by considering the long and toilsome preparation of head and hand, endured by those working here, in fitting themselves to stand upon the outposts of knowledge, and conquer for her new possessions from the sway of mystery and darkness,—only by watching them, day after day, laboriously accumulating facts and eliminating truth by processes as tedious and complicated as those which serve to separate the glancing metal from the unsightly ore, that we can appreciate the scientific department. It has been, since its foundation, under the control of Dr. E. WOLFF, a gentleman combining in a high degree the qualifications that are demanded by his position. He is at present assisted by Dr. RITTHAUSEN, and several young gentlemen.

The investigations carried on here have had especial reference to the production of milk, of flesh (mutton,) and of manure under various circumstances. A very great number of analyses have necessarily been performed, and have been so executed as to command the confidence of all capable of judging of their value. In a following communication I shall give some of the results obtained here, and will at present, with your permission, occupy a little space in urging the establishment of similar "Experiment Stations" in the United States.

It would not be difficult to name several gentlemen of wealth, owning fine farms, fine cattle and other live stock, accustomed to farming in a liberal and enterprising manner, who thus have just the "Station" where experiments could be most advantageously prosecuted. An annual outlay of a few thousand dollars, would support series of investigations, which, if conducted by men of proper ability, could not fail to be highly profitable. State Ag. Societies here may find a field of labor, yielding results not second to any of those that now follow their useful efforts.

The Transactions of the N. Y. Ag. Society, for example, contain many valuable papers, but very few of them bear the stamp of remarkable excellence; very few of them have announced important *principles*. With facts they are replete; but they do not present many subjects in so varied aspects, do not so exhaust observation that a generalizing mind can deduce from them statements of universal application.

What agriculture most needs, is the *establishment of its doctrines*—not the proposition of fancies, or of facts which hold good for this or that township, but the evolution of a *general theory*, applicable everywhere. Engineering is a matter of certainty; navigation could not exist without a scientific basis, and agriculture can only get out of its teens by taking hold of all the dim lines of fact and following them out to where they converge to splendid foci, standing in which one can look back and see harmony where otherwise only confusion and contradiction would appear. If agriculture would do many things, it must think many thoughts. If it would accomplish great results, it must find the centers of power. A child that turns the valves

of an engine, can control safely the railway train that an army of elephants could not check without disaster. The basis of doctrine will not rapidly unfold itself. It must be unfolded. If agriculturists would know, they must inquire. The knowledge they need belongs not to revelation, but to science; and it must be sought for as the philosopher seeks other scientific truth. When farmers contribute to the carrying on of investigations having for an object the discovery of the laws of culture and vegetable growth, and conducted by minds that bring to their task the requisite vigor, skill and knowledge, then light will flood in, where now is only obscurity. When Ag Societies make Experiment Stations their care and pride, they will more fully and legitimately approach the accomplishment of their end, the perfection of agriculture.

The discovery of new truth and the diffusion of that already learned, may be most appropriately carried on together. He that is so thoroughly acquainted with all that is known with reference to every topic as to be able to investigate the unknown; he who stands so advanced upon the outposts that he can look into what lies beyond, is of all the most capable of instructing others. The doctrine of AGASSIZ, that the teacher and investigator should be one, is most true. He who would teach, must command respect by an ability to impart more than the people can find in books. He who makes researches, should teach in order to keep before his mind the deficiencies of present knowledge.

While appeals to Legislatures have been made in vain for the endowment of agricultural schools—while the means of agricultural instruction are comparatively nothing, and of accurate experimental investigation absolutely wanting, it remains to private or corporate enterprise to open the way; and this is no unsafe adventure; but, with no need of extravagant outlay, will bring an ample return. The active minds of Europe are united in their expressions of admiration and astonishment at American progress, but here the means of genuine advancement in agricultural knowledge are vastly superior to our own. How long shall this be?

S. W. JOHNSON.

We hope the suggestions of Mr. JOHNSON will receive, as they merit, the attention of the officers of our State Agricultural Associations, and of the enlightened and liberal friends of agricultural improvement. We have as a people, talked much about agricultural education, but as yet have done little to promote its advancement, and absolutely nothing towards developing the true principles of the science of agriculture. We had hoped and still hope, that our State Agricultural Society would take the lead in devising and carrying into effect some feasible plan for the promotion of Agricultural Science. An institution, like the one described by our correspondent, where science and practice should go hand in hand—where the results of the laboratory should be tested by exact experiments on the farm—where the multitude of questions that are constantly arising in the minds of intelligent farmers, with regard to the adaptation of manures to particular crops and soils, the best manner of feeding animals, &c. &c. should be decided by the investigations of chemistry and actual experiment, could not fail to be of immense practical advantage to every farmer.

Profits of Accurate Farming.*Statement of D. D. T. More's Profits for 1853.*

We have been favored by Mr. MORE, with the accompanying transcript from his farm books for the past year. He has for some years practiced keeping an accurate account of every item of expense, and also of every cent received, and of charging the land devoted to a particular crop with the expense of cultivation, and crediting it with the produce. This system is one worthy of adoption by every farmer. It shows how much the farm produces, the cost of carrying it on, and affords a balance sheet full of suggestions for next year's work. The soil of Mr. More's farm is light, and has, under his superior tillage, been restored from an exhausted condition to a high degree of fertility.

June Potatoes—4½ acres.

One hundred sixty-two barrels sold,.....	\$161 73
31 bushels small potatoes for seed at 30c	\$9 30
Labor of planting and cultivating,	25 00
Digging and assorting,.....	19 00
Marketing,.....	23 00
	<hr/> 76 30

Amount of profit,..... \$85 43

Mercer Potatoes—10½ acres.

Amount of sales, mostly at 50 cents per bushel,....	\$781 00
61 bushels seed at 30 cents,.....	\$18 30
Labor of planting and cultivating,	42 00
Digging and assorting,.....	65 00
Marketing 640 barrels at 10 cents,.....	64 00
	<hr/> 195 30

Amount of profit,..... \$585 70

Oats—10 acres.

Amount of sales,.....	\$174 00
Expenses of cultivating and harvesting,.....	135 25
	<hr/>

Amount of profit,..... \$38 75

Early Sweet Corn—2 acres.

Amount of sales,.....	\$58 23
Expenses cultivation,.....	40 00
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Amount of profit,..... \$18 23

Strawberries—1½ acre.

Amount of sales,.....	\$235 23
Expenses,	91 50
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Amount of profit,..... \$143 73

Asparagus—¼ acre.

Sales, 902 bunches at 12 cents each,.....	\$108 24
Expense of cultivation,	29 32
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Profit on 40 rods, \$78 92

Rye—50 acres.

Sales of Rye and straw,.....	\$1,132 71
Expense of cultivation and harvesting,.....	375 50
	<hr/>

Amount of profit,..... \$757 21

Indian Corn—8 acres.

Amount of sales,.....	\$340 00
Expense of cultivation,*.....	244 80
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Amount of profit,..... \$95 20

Long John Potatoes—5 acres.

Amount of sales,.....	\$354 25
Expense cultivation,.....	90 25
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Amount of profit,..... \$264 00

Peach Orchard—5 acres.

Sales, 858 baskets fruit,.....	\$501 00
Expense of gathering, marketing, &c.,.....	135 00
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Amount of profit,..... \$366 00

* The field was highly manured, a crop of rye turned in, and one ton of guano applied, which accounts for the large expense

Sweet Corn—12 acres.

Amount of sales,.....	\$459 73
Expense of cultivation, &c.....	185 25
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Amount of profit,..... \$274 48

Pasture, 50 acres; meadow, 10 acres; garden, yards and lanes, 3½ acres; pasture for pigs, 2 acres—keep 10 cows, about 100 fowls.

Sales of eggs, butter, milk, poultry, pigs, produce of garden, and cash received for pasturing,.....	\$576 54
Expenses,	225 00
	<hr/>

Amount of profit,..... \$351 54

On hand 400 gallons currant wine, worth \$1,.....	\$400 00
Expenses of manufacturing, raising, &c.,.....	200 00
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Amount of profit, \$200 00

Recapitulation.

Whole amount of sales,.....	\$5,282 66
Whole amount of expenses,.....	2,023 47
	<hr/>

Whole amount of profits,..... \$3,259 19

Deduct the interest on 78 acres of land valued at \$15,000, at 7 per cent,.....	\$1,050
Rent of 80 acres of land,.....	205
Taxes,.....	42
Wear and tear of tools,.....	100
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Clear profit on 159 acres of land, \$1,862 19

Mr. More experimented the past year considerably with guano, and is confident that upon the corn crop the increased product made the expenditure a profitable one. A solution of it applied to a portion of his strawberry plants, gave a manifestly greater crop, both in size and quantity. Two acres of land, planted to sweet corn, which were already in a high state of cultivation, did not yield more abundantly for the application of guano, and a portion treated with superphosphate of lime showed no perceptible increase of product. A part of ten acres of land in oats, also previously highly manured, received a dressing of guano, but this portion did not produce more grain than the other, though the growth of straw was somewhat heavier. Mr. More has purchased four tons of guano for use the coming season, and will experiment more accurately with it. He also used the superphosphate of lime last year, but is not prepared to speak decidedly with reference to its value as a fertilizer on his light soil. He regards the turning in of clover and green crops generally as the most profitable manure for his farm, while he husbands most carefully all the animal manure, even to the droppings of his fowls.

The value of barn-yard manure is not reckoned in the expense, as it is produced and remains upon the farm. When special fertilizers were used the expense is charged. Some of the crops raised by Mr. More are such as farmers remote from markets could not raise profitably, but the bulk of his profit is on field crops which command a ready sale in all sections and at all times. This balance is probably a larger one than most farmers will be able to secure, but it shows what accuracy, foresight and energy can accomplish. Who will now say that farming cannot be made lucrative? or who need seek a more profitable investment of money than in a farm which under proper management can be made better year by year? Add to this the fact that tilling the soil is a pleasant, healthful and scientific calling, subject to no sudden ups and downs, and we are forced to the conclusion that the farmer who lives up to the spirit of the age, who cultivates his soil understandingly and his mind assiduously, is the most independent and well to do man of the times, the true COUNTRY GENTLEMAN.

How to Build a Good Fence.

L. TUCKER, Esq. - In writing to you a few weeks since, asking for information respecting draining tile, I promised to send you a description of a fence, which I have found to answer well here.

My farm consists of 130 acres. I bought it three years ago, from one of our old Canadian farmers. It was a model farm, under his management, for burrs, Canada thistles, June grass, foxtail, and all other matters and things of this sort, as well as for bad fences—there were not good rails enough on the whole place, to make 50 rods of fence. The old man and his neighbors' cattle had many a contest, to know which should hold possession.

After coming into possession, my first effort was to get a good outside fence. This I soon accomplished, by building something over a mile of common board fence. This was constructed in the usual way. But next, I needed cross fences, for the farm was all in one field, and I designed laying it out in eight acre lots. I found, on a short calculation, that in accomplishing this, I had to build over 3 miles of fence; and to get a good fence at the least cost, was what I wished. My neighbors could not learn me much in reference to the matter, either by example or precept, so I had to figure it out.

My first operation was to purchase 300 saw logs in the woods. These were drawn to a saw mill with my own teams in the winter. Next I bought about one thousand cedar posts, and cut and drew home nearly another thousand. The lumber was partly drawn by my own teams, and partly by others. As soon as the spring opened, I commenced operations—this I did by squaring off my intended fields, and putting in stakes on the lines of the fences. This done, my plowman commenced his part, by throwing three furrows to each hand, leaving as large a space in finishing, or between them, as convenient. He then altered his clevis, and went down with another furrow as deep as he could run the plow—returning in the same furrow to throw up the loose earth. I found that he got down full 15 inches. Two men now commenced sinking holes eight feet apart and one foot deep in this furrow, or ditch. In soft clay or loam, they dug 86 holes in about three fourths of a day. As soon as the holes were dug, we commenced putting in the posts. This is a simple operation, but it is best done, I think, by first setting every tenth or twelfth post in line, and then using two good strong cords stretched from these to guide the man in setting the rest.

I do not think that it is of any use to pack the earth hard round the posts. In fact I believe it does harm. As soon as the posts are set, we strike a line on the posts, two feet three inches above the natural level of the ground; the bottom board, about twelve inches wide, is now nailed on, its upper edge even with the line. The plow is again called into requisition, using, however, only one horse. The earth that had been thrown from the line of the fence, is now turned back. This is done by throwing in three furrows on each side,

and then throwing these up again. Two more boards, six inches wide, are now nailed on—the first with an opening of 6 inches, and the second 8 inches. The nails used thus far, are common two-and-a-half inch cuts, but in nailing on the battens, which I do on each post, we use four inch nails, putting one through each fence board.

The next operation and last, as far as the fence is concerned, is to set two men to finishing the banking. This is a quick and simple operation—one goes ahead and throws up the loose earth out of the ditch; the second clears out the ditch, and finishes the bank. Timothy seed is at once sown on very thick, and the bank is slightly lamp'd down with the back of the shovel. Two men will easily finish the banking of 40 rods in a day.

Such a fence when finished, will cost here less than forty-five cents per rod. It will be five feet high from bottom of ditch—it cannot be jumped by any common animal—it occupies with me 5 feet of land—it is easily built, a large share of this digging and banking being done by horses, and all the rest is performed by common farm laborers—it is quickly built—the posts never heave, even in softish or wetish soils—the water cannot freeze round them, and they will last longer than posts set in the common way.

If you deem this worth publishing, I may trouble you again with an account of some of our doings in these parts. I think more of our farmers should take the *Country Gentleman*, and write you now and then to let you know what we are doing in Canada. I am only a beginner in farming, but I have raised crops on my Thitly Farm, that I guess would be hard to beat. I have tried guano, and will try it again; but the manure from the yard, well rotted, and freely used, rather goes ahead of it. I have bought, made and used over fifteen hundred loads in about two years and a half, and I find it pays. Yours, J. SIMPSON. *Boumanville, C. W., March 28, 1854.*

Water in Lead Pipes.

MESSRS. EDITORS—Various newspapers at the present day, are full of the evil effects of having water run through lead pipes. Some accounts state that individuals have lost their lives in consequence of using water which has run through a lead pipe, and others that they placed fish in a tub of water, which lived only two hours after being put in the water. Is it not more probable that the water possessed the unhealthy or poisonous effects within itself, or that it contained within its mineral properties, some substance which caused the lead pipe to corrode, and thus communicate poison to the drinker? In proof, I will say that I bring water from an excellent spring, one hundred and twenty rods, through a half-inch lead pipe with only six feet head and fall, into a cistern lined with lead, and I cannot perceive any evil effects as yet; and I placed in a tub which takes the waste water, trouts at sundry times, and they lived in the enjoyment of good health from four to six weeks at a time, and until they jumped out upon the dry ground while at play and died before seen. A. D. ARMS. *E. Montpelier, Vt.*

Farming in Tennessee.

A subscriber in Van Buren Co., Tennessee, gives the following account of the state of agriculture in that vicinity. He hardly need to have added that the farmers generally were opposed to book farming. The detail he gives of their practical operations is sufficient to prove that they have no faith in agricultural publications or associations. He says:—"Farming in this part of the State, is in a wretched condition. Not one man in ten will allow his land to be ruined with a *"big plow."* I do not know of more than half a dozen *two-horse* plows in the county. And such a thing as a plow requiring more than two horses is unheard of. The land is all *scratched* over in March and April for the summer crop. The instrument used is here called the *"bull-tongue plow."* It is about ten or twelve inches long and four inches wide at the widest part, turned forward so as to run under the surface about two inches, or probably a new one will reach to the depth of three inches. This does not pulverize the soil by any means. What is turned up is left in great clods until *"melted by rain"* or broken by the same instrument in tillage. Such a thing as a harrow or roller I have yet to see for the first time in this county (Van Buren.) Corn is almost the only field crop depended upon. Oats are sown by some farmers to *"rest"* the land after corn has been taken from it for a series of years. Some raise enough wheat to allow them *"biscuit every Sunday morning."* There are not many farms that produce more than thirty bushels of corn per acre. You will doubtless be surprised that it can do this under such tillage. The land is as productive as can be found anywhere or it would not. Cattle and hogs are the principal stock raised. They are all of the commonest kind. The cattle are generally very small, being fed on the husks of corn in winter and pastured on the coarse mountain grass in the summer. Hogs are of the land-pike breed, (if you know such an one,) and scarcely ever see corn from the time they are small pigs until they are two or three years old, when they are fattened. They subsist on acorns and roots, and are the more highly prized from being *"shifty."* It requires from fifteen to twenty bushels of corn to make them weigh one hundred and seventy-five or two hundred pounds. They are generally fattened by being turned into a lot containing from one to two acres, and fed as much raw corn as they can eat and waste, for about two months. No animals are put under shelter but horses, and many of them are not. Some few horses are raised for sale, but the people find less profit in this than any other kind of stock. They are fed, almost exclusively, on corn, and the blades stripped from the stalk in August, and cured. *Hay is not known.* I do not believe that there are ten acres in the county, from which hay is cut. I will not describe barns, barn-yards, fences, &c., for you can imagine these from what I have told you of other things. Fruits are almost entirely neglected. I have been here for three years, and have been constantly endeavoring to try and get the people to quit this

skimming, impoverishing (both of land and man) system, and to adopt a renovating, enriching system. All say that I will find my theories all fail in practice, that *book farming* will break a man up, &c.

I have bought me 250 acres of good sandy land, and I am going to try and show these people that all I have said was not *"wild theory."*

Reduction of Bones by Ashes.

L. TUCKER, Esq.—I believe that the reduction of bones by means of ashes, as spoken of in the *Country Gentleman* of Feb. 9th, would require from two to five or six months, depending partly upon the strength of the ashes, but more upon their being kept suitably moist. If too much water is applied, they will leach, and a portion of the potash will be lost; if too little, the organic part of the bones will escape in the form of ammonia, sulphuretted hydrogen, &c., thereby at once diminishing their value as a manure, and rendering the premises disagreeable and unhealthy. As much water should be applied as the ashes will hold, without leaching; and the bones should be kept perfectly covered.

There are some difficulties attending this process; it requires frequent attention—the hoghead, or other vessel, in which the ashes and bones are placed, must be away from any building, and yet must be in a cool place—probably some gaseous matter will escape at last; and I did not therefore intend, nor do I now, to recommend the reduction of bones by ashes as a general thing, and certainly not where there are large quantities of bones to be disposed of; for in that case it is quite worth the farmer's while, to procure sulphuric acid—from $\frac{1}{4}$ to $\frac{1}{2}$ of their weight—and reduce them to a superphosphate—rather to a mixture of phosphate and superphosphate—as has been recommended in nearly all our agricultural papers. What I wished to say, is, that where, as in many families, there are a few bones and a few ashes, wanted for no other than agricultural purposes, they may be preserved in the way I have described, without any very great loss of their fertilizing properties. In this way, the bones of the preceding year may be reduced to a condition for tolerably prompt action—not as prompt as if reduced by sulphuric acid—by the time for planting, with the exception of a few of the last, which will be found to be hard, and may be again treated with ashes and kept over till another year. Theoretically the idea of reducing bones by ashes does not look well. It would be said, that the alkali will drive off the ammonia from the organic part of the bones. Such is undoubtedly the tendency; and will be the result, to a great extent, if the whole process is not well managed, and perhaps to some extent, if it is managed in the best way possible. It might also be said, that the phosphate of lime, of which two thirds of the bone is composed, will remain a phosphate still, instead of being changed to a superphosphate. This I suppose is true; and as the phosphate is less soluble than the superphosphate, I have no doubt that bones reduced by ashes act somewhat less promptly than those dissolved in sulphuric acid. But for that very reason they act more permanently, and so may be of nearly equal value in the end. Yours truly, J. A. NASH. *Amherst, April 20.*

Cement Pipes for Water.

MESSEES. EDITORS—In looking over a late number of the *Country Gentleman*, I notice that Mr. S. D. T. of Fergusonville, is desirous of learning the best way to bring water to his building, and if water lime can be laid with safety. I will try to give you what little knowledge and experience I have had in bringing water through what we call cement pipes, and think it the best for common purposes, if well laid.

I dug the ditch from the spring to the house, 3 feet deep, of sufficient width for a man to work in conveniently. The spring was about 3 feet higher than my house, and the water had to run through a hollow of from 8 to 10 feet in depth, of a gradual ascent both ways. The pipe I laid was of an inch bore. The mixing of the mortar is too well known to require explanation. The bottom of the ditch wants to be made smooth and of a shape to receive the mortar. The manner of laying the pipe is to have a trough 6 ft. long, 4 inches in depth, and 3 in width in the bottom, flaring towards the top. This trough is filled with mortar; then turned bottom side up in the ditch. The rod then is imbedded in the mortar and another trough full is turned on that, and smoothed around with a trowel. The rod must be carefully drawn, until it can be turned up so as to admit of another trough full. At the end of the rod there must be a short piece of rod attached by a cord some 6 inches long, to smooth out anything that might happen to crowd in behind the main rod. At the lowest point in the hollow, we inserted a piece of lead pipe in the side of the main pipe, for the purpose of cleaning it whenever the sediment obstructed the free passage of the water. By pulling the cork from that piece of pipe, the water will rush through and cleanse it thoroughly. You can set a barrel with both heads out, over the let-off place, so that it can be easily got at, at any time.

It is necessary in laying through hollows, that the pipe should be some heavier and a sufficient time for it to harden. When you arrive at the summit on the opposite side from the spring, you there insert an air tube, to come near the top of the ground, protected in some way to let off the air that will collect at that point. If not let off, it will prevent the water from passing.

Pipe, laid in this way, I used twelve years, and left it in the eastern part of the State of New York, in perfect order. I laid down some lead pipe about three years after, that was a source of considerable trouble from bursting.

I should have said that the sand should be coarse, and washed free from mud and dirt. The proportion that I used was $\frac{2}{3}$ sand to $\frac{1}{3}$ water lime. W. P. Lorain Co., Ohio.

CREAM.—The first fifth portion of milk from the cow contains about one twentieth part of cream; the second fifth, one twelfth; the last fifth, one sixth. How important then to be careful to get the last and richest drop, even if it were not true that cows are quickly dried up by a slovenly practice of leaving a small portion in the udder.

Plowing in Green Crops.

I see in the last vol. of *The Cultivator*, p. 300, an article under the head of green manuring. That part which attracted my attention, was the process of throwing the green crop flat on the ground for plowing under, with a roller, harrow or chain. I have invented another method, something different from the above, which is very cheap, and does the work to perfection, without any extra labor for the team. The process by which this is performed is as follows. Most farmers are acquainted with the gage roller that is attached to the beams of some plows to prevent their going too deep. This roller is placed in an iron frame, fastened to the beam of the plow, and hangs in the lower part of the frame, rolling on the ground to gage the depth. The improvement consists in having a three quarter inch round iron bolt fifteen inches long, passed through the frame and gage roller; then put a roller on each end of the bolt, five inches long. This makes three rollers running all abreast, which will roll down a strip of grass or other green crop fifteen inches wide. These rollers will not pass off the top ends of the grass before the plow will be turning the other ends under. Thus it will be seen that the work is done at the same time and to perfection, without making it any harder for the team. I offer this improvement for the benefit of my fellow agriculturists. ELIJAH HOAG. Keeseville, N. Y., 2nd Mo. 1854.

Influence of Agricultural Papers.

Our agent at Columbia, (Conn.) in remitting a list of subscribers, remarks:—"I believe this makes a respectable list for a rural town with less than 1,000 inhabitants. You will find by your books, that from the publication of the first no. of *The Cultivator* to the present, you have had subscribers in Columbia. What little our mite has been towards the pecuniary support of the paper has doubtless been gratifying to the publishers; yet, after all, in my judgment, the great reward has been ours. It has stimulated to emulation and improvement. A spirit of inquiry has been waked up, in regard to agricultural interests and horticultural improvements, which is visible in every section of the town. Better crops are raised—better farm buildings are being erected—better stock is being raised and selected—and horticultural and rural embellishments are springing up in and around our dwellings, which plainly indicate that their inmates have been made acquainted with the suggestive topics of the "Agricultural papers."

"Last fall our county formed an agricultural society, and held a fair about six weeks after its formation. This town furnished a good list of members, although at the extreme south of the county, and took some five or six of the first premiums, while another town in the county, with three times the inhabitants, and equal natural advantages, but takes no agricultural papers, furnished no members, and took no premiums." [We did not suppose there was a town in old Connecticut, where the people were all so far behind the age as to be entirely without an agricultural journal. No wonder they did not take any prizes or furnish any members for their County Ag. Society. Such Societies are sustained by those who read.—Eds.]

Stick to the Farm.

BY HENRY F. FRENCH.

Stick to the farm, young men. Now when land and its products, the true wealth of the nation, are within your control—when corn and wheat, and hay and cattle, and the produce of the dairy bring double their former prices, while the wages of farm labor, always the last to be affected by fluctuations of business, or political affairs, have advanced comparatively little; now, when the nations of the earth are re-converting their plowshares and pruning hooks, into swords and spears, when great armies are gathering together to destroy each other, and lay waste the beautiful earth, which God has given to man to "till and to keep;" now, when the labor of whole countries is diverted from producing the means of feeding and clothing and sheltering and blessing mankind, to a worse than idle consumption of the produce of your labor; now while the farmer is rapidly gaining the respect and wealth and influence due to his position as "lord of the land," be not seduced from your honorable and independent place, by whisperings of ambition, urging you to seek for wealth or ease, or honor, in a city life.

You are tempted to exchange the hard work of the farm, to become a clerk in a city shop, to put off your heavy boots and frock, and be a gentleman, behind the counter! You, by birth and education, intended for an upright, independent, manly citizen, to call no man master, and to be no man's servant, would become at first, the errand boy of the shop, to fetch and carry like a spaniel, then the salesman to fill the place which at best, a girl would fill much better—to bow and smile and cringe and flatter—to attend upon the wishes of every painted and padded form of humanity—to humbly suggest to rakes and harlots, as well as to starched and ruffled respectability, what color and fabric best becomes the form and complexion of each—and finally, to become a trader, a worshipper of mammon, as Carlyle says, "a kind of human beaver that has learned the art of ciphering," compelled to look anxiously at the prices current of cotton and railroad stocks, in order to learn each morning, whether you are bankrupt or not, and in the end, to *fail*, and compromise with your creditors and your conscience, and sigh for your native hills.

Or, perhaps, your party being in power, you would obtain a clerkship at Washington, and remove your little family from the north, to a more genial climate, to live at your ease, and grow rich on twelve hundred dollars a year! You give up your little farm, your New England privileges of schools and churches, your independent and influential membership of parish, and district and town and church, the woods and play grounds for your children, your friends and kindred and *home*. Twelve hundred dollars is a large sum to you, half the price of your farm perhaps, twice the amount of the minister's salary. With your habits of economy and thrift, you can live on half the amount. Your arrangements are to be made. The homestead

is sold, and you are *landless*. After all, it is not so easy parting with our household gods. The trees our hands have planted take root in our hearts, the vines and roses, twined by our own fingers, and those of our loved ones, over rustic arbors, cling round us more closely than we thought. Your labor has been mingled with the soil of every field. Tears are in the eyes of your wife, at every thought of departing, but she trusts in your superior judgment, and no murmur escapes her lips at your decision.

You have left your home. At the end of a single year in "the city of *magnificent distances*," you have bitter realizations of the meaning of that phrase. It has proved indeed to be full of magnificent distances, for you, from happiness, from independence, from advantages of every kind. For the first time, you have felt how sore a thing it is, for a northern freeman to be dependent, to labor at stated hours, at the bidding of a superior officer, to feel that the office you fill, on which depend your very means of living, for yourself and family, is held at the arbitrary will of another, who may, if he please, make a servile conformity of your views with his own, on political or what you may deem moral questions, the condition, by which you retain your place. You, who at home, had never seen the man who dared claim to be your superior, are forced to submit to the iron rule of caste, to send your card to the Secretary, whom you once knew perhaps as an equal, and wait an hour, with the colored servant in the hall, to be told at last, to call another day—to be slipped over, or shaken off by the "member" whom you helped to elect, and who had now no further use for you; and consume your energies in endeavoring to keep the toe of your boot from proximity with that part of his person, where his honor holds its seat—to be assessed to support party presses, whose principles you may despise. In short, you have sold your manhood for an office, your birthright for a mess of pottage. But the half is not yet told, for the mess of pottage even, is not sufficient for your wants. Your salary is at starvation point. You must pay two hundred dollars for a house, with two parlors and a basement for servants, without a cellar, without a closet, without a pump or aqueduct, without a sink, or clothes-yard or garden. Your wife with the aid of a servant, cannot do the work so easily as she did it alone, at the north. All the water comes from the city pump a dozen rods off in buckets; the slops are poured into the street, your clothing is crammed into wardrobes, your supplies must be procured daily at market, in contemptible quantities—in short, everything, except the parlors, which are for show, and to make you seem respectable, must be richly carpeted and curtained, everything else is adapted to the idea, that labor is degrading, and that the comfort and convenience of those who perform it, is not worth consulting. The thrift, and energy and comfort of northern households, is unknown in this latitude.

Look now, at the prices of necessary articles of food. On your farm, however small, your cellar was always

filled with an unlimited supply of all such vegetables, as you desired, and barrels of beef and pork of your own slaughtering. Your granary had always, as much of corn and rye, and perhaps of wheat, as you chose to use. Your cows gave you milk and butter in abundance at all times, and your garden and orchard, fruits for yourself and the children, and the neighbors, without stint. Now, (I give actual market prices in Washington) you buy one peck of potatoes for "three levies," or thirty-seven and a half cents, beef at sixteen cents a pound, turkeys at from one dollar and a quarter to two dollars each, chickens, with the shells scarcely off their heads, not larger than robins, at twenty-five cents each, butter at thirty-one cents a pound, and milk at eight cents a quart, and so on to the end of the chapter. Instead of enjoying the abundance of the earth, as you have been accustomed to do, you begin to associate the idea of dollars and cents, with the food on your table; you are compelled to vex yourself with economizing in the details of living, instead of by system, and to feel your soul gradually narrowing in, to a conformity with narrow circumstances. You find yourself a poorer man than while upon your hard northern farm, poorer in your animal means of living, poorer in comparison with those around you, poorer in independence, in prospects for the future for yourself and family, poorer in everything.

We might follow this train of thought into further details, did time allow it, but enough it is hoped, has been said, to induce an independent Northern farmer to hesitate long, and consider well, before he exchanges his position for any place, where any master comes between him and his Maker.

The beautiful lines of Mrs. SIGOURNEY give a truthful, though poetical picture of Farm Life:—

Saw ye the farmer at his plow
As you were riding by?
Or wearied 'neath the noon-day toil,
When the summer-suns were high!
And thought you that his lot was hard?
And did you thank your God.
That you and yours were not condemned,
Thus like a slave to plod?

Come, see him at his harvest home,
When garden, field, and tree,
Conspire with flowing stores to fill
His barn and granary.
His healthful children gaily sport
Amid the new-mown hay.
Or proudly aid with vigorous arm,
His tasks, as best they may.
The Harvest Giver is his friend,
The Maker of the soil,
And Earth, the Mother, gives them bread
And cheers their patient toil.
Come join them round their wintry hearth,
The heartfelt pleasures see,
And you can better judge how blest
The farmer's life may be. *Exeter, N. H.*

MONUMENT TO MR. DOWNING.—The committee appointed at the last session of the American Pomological Congress to obtain funds to erect a monument to the memory of the late A. J. DOWNING, have received for this purpose about one thousand dollars. The Horticulturist states that it is proposed to place it in some of the public grounds at Washington, and that the design is a vase of pure white marble elaborately carved, on a pedestal bearing a suitable inscription. The whole to be nine feet high.

Home Manufacture of Poudrette.

Inquiries like the following have often been made, and many have desired to know how they could avail themselves of a valuable manure, and at the same time render the apartments alluded to entirely free from any odor. Information on the subject of economy and cleanliness combined, which could not be obtained in any other way, we have no doubt will be acceptable to many of our readers:—

"Will you please inform me the best and most convenient mode of manufacturing night soil into poudrette, so that it may be drawn on land and spread without any odor, or inconvenience—my inquiry refers only to home use, of this powerful manure. B. G. Oneida Co., N. Y."

The contents of privies, commonly known under the name of night soil, furnish an exceedingly powerful manure when properly manufactured, and under right management, the process will destroy all the effluvia arising from those deposits, and render the closets entirely inoffensive.

When a reservoir or small stream of water is at command, so that a current may be made to sweep through several times a day and carry off the contents into the manure yard, or into a covered bed of peat or a compost heap, this forms perhaps the most perfect mode of removal. An essential requisite however, is freedom from the influence of frost, and the closet should therefore be connected with the dwelling where the reservoir of water may be kept from freezing, and from which there should be an underground channel of considerable size and slope. We have known all this to be perfectly accomplished by means of a lead cistern in the upper story, which was kept supplied with rain water at all times from the broad roof of the house, and which was sufficient besides for baths, washing, and all other domestic purposes.

When a current of water cannot be used, the next best contrivance, is to form a strong tight box, of matched pine plank, and give it two or three coats of coal tar, so as to render it durable, and proof against moisture and warping. It is to be placed on two runners like those of a sled, made of plank or scantling, to the forward end of which a chain and iron hook are attached, so that it may readily be drawn off by a horse. This box must be of such a size as to fit a cavity made on purpose under the building.

The next thing is to provide a supply of some efficient deodorizing substance. Dry sawdust or thoroughly dried peat does tolerably well, with the occasional addition of ashes and powdered charcoal. Charcoal dust alone, is much better, and if daily applied in small quantities will nearly destroy all smell; but it is absolutely essential to success that a full supply of this material be kept near at hand in a large box or hogshead in a shed or out-house, where it shall be always dry and in a condition to apply every day, summer and winter. Animal charcoal is still more efficient than common charcoal, and may be made to form a portion of a material made as follows:—Make a pile of peat, turf, old straw and brush, mixed with tanner's

shavings and broken bones; let the pile become dry enough to burn, and then cover it with sods and set it on fire. It should be suffered to burn with a slow, smothered combustion, so as to char without consuming the materials. When the process is completed, the whole heap, including the turf covering, should be well mixed together and broken fine, and then placed in a large box under shelter, for daily use. Any portion of clay introduced by means of the turf, and well dried, forms a powerful absorbent of fetid matter. As often as may be convenient, a horse is hitched to the hook and chain, and the whole is drawn off into the barn-yard, when it is quickly discharged by turning the box upside down; and after covering the bottom and sides with the prepared material already described, it is replaced as before. The strong manure thus obtained, will, if well mixed, possess but little odor, and may be used directly, or may be mixed with common manure in the compost heap. Durable plank should be placed under the runners, to prevent their sinking into the earth, and to enable the horse to start the box easily. It is said that those who are employed to obtain the materials for the wholesale manufacture of poudrette, throw in before commencing operations, a few quarts of a strong solution of copperas, which immediately neutralizes the effluvia, and adds to the value of the manure.

Since the above was written, we have received the following:—

The different modes of saving as well as making manure very properly engage the attention of agriculturists to a great extent. There is one mode of saving manure, however, which is very much overlooked.—The farmers, generally, in building a "palace," for the accommodation of the household, either dig a pit to a great depth, or a shallow one with a moveable building, to be removed as often as the pit becomes filled. In the former case, there is fitted up a complete nuisance, (after a year's existence) and a trap to frighten mothers and nurses. The latter is a nuisance from the beginning, and a subject of complaint almost everywhere. The plan I have adopted is simple and cheap—leaving the "palace" as sweet as any chamber in the house, and productive, yearly, of a tank of manure worth twenty-five dollars—a species of poudrette, I venture to say, more fertilizing than any that can be purchased.

I have sunk a tank or pit, ten feet square and four feet deep, and lined with plank—stone or brick walls would, perhaps, be better. Upon transverse beams is built the "palace," five feet square. From the kitchen and wash-house, I have underground sewers emptying into this tank, through which all the slops of every description pass. The seat is fixed on hinges, so that the whole top may be opened up, and at this opening is deposited all dirt accruing about the house, including the ashes from two fires. The dirt and ashes absorb all the slops and moisture, and prevent the slightest unpleasant smell. This tank may be filled once or twice a year, and each filling would be worth to the garden the sum before mentioned. It is astonishing that this is so much neglected by persons, even, who know the value of manures, and can appreciate cleanliness and convenience. B. B. Pittsburgh, Pa.

Culture of the Carrot.

A correspondent recently inquired "if carrots could be grown two years in succession on the same ground, and what manure was best for them." In answer to this inquiry:—

Mr. G. W. DURANT of Rensselaerville, says—"I have planted the same ground to carrots, for the last six years, and with the exception of last year, the crop has improved with each year's cultivation. Last year the draw-back was occasioned by planting a little too thick. I have manured every other year; but think it would be better to manure lightly every year. Mine is a clayey loam, and I have manured with spent tan-bark, used first as bedding for my horse stable. My method is to back furrow the ground in beds four or five feet wide, and then plant in drills across these beds, from 14 to 18 inches between the drills, dropping the seed by hand, in small furrows made by a long bitted very narrow hoe, and then covering with a rake, hauling the dirt lengthwise of the drills. In this way, they can be almost entirely weeded with the hoe by standing on the alleys between the beds. In this way, my yield has been from 900 to 1,200 bushels to the acre. One thing more I will state. My best crop was planted on the 14th of June. Another thing—I plow deep. The Orange I consider the best variety.

Mr. Wm. J. PETTEE of Lakeville, (Conn.) says—"My mind is—use fine, well rotted manure, and plenty of it—not less than 60 cart loads to the acre—spread on the manure early in the spring, and plow it under 12 inches deep, and 15th May plow again, and thoroughly pulverize the soil. Do this on the same ground just as many years in succession as you please, and you need have no fears of success in raising carrots. Indeed this course is preferable to using new land every year."

Stump Puller.

I observed in *The Cultivator* for December, an inquiry from a subscriber at Port Hope, C. W., as to the best machine for pulling pine stumps—also how many could be pulled in a day, and what the cost when the work was done by the job. I have been in the business of pulling pine stumps seventeen years, and well understand the business. There have been five or six different kinds of machines introduced into our country; but I have found but one that has proved successful and profitable, and that is called "Stewart's Crotch and Lever Stump Machine." This is thought to be the best, by those who use stump machines.

The number of stumps that can be pulled in a day, depends entirely on the size of the stumps and the kind of land they stand in. The number that I have pulled per day varies from two to one hundred—the average probably twenty-five to thirty. I frequently pull by the day at six dollars per day, three hands, team and machine. When by the job, from fourteen cents to one dollar per stump.

I would urgently advise any one wishing to commence the stump pulling business, to procure a man well acquainted with the business, to superintend the making and ironing of the machine, making chains, spears, pike poles, &c. By so doing he will save several hundred dollars in time and expense.

This machine was patented in 1840, by F. A. STEWART of Catharine, Chemung co., N. Y. I do not know that they are kept for sale ready made; but I can furnish them complete for \$175. ELIJAH HOAG. Keeseville, N. Y., 2nd Mo. 19, 1854.

Proper Time for Cutting Grass.

MR. LUTHER TUCKER—For more than thirty years it has been a common saying among farmers, that timothy hay should not be cut until ripe—that is, until the heads were plump and full of seed. I was raised in a country where grass was thought ready to cut as soon as it was large enough; and after I came here, I followed the same practice, although in opposition to the opinion and practice of many of my good neighbors. I followed the practice so long, and had so many opportunities to prove it, that I know to a certainty that my practice is right. For some 8 or 10 years past, I have used mostly timothy hay. Previous to that I used more clover. Very often I have not been able to get it all cut before harvest; and having several cattle and sheep yards, some one lot of cattle had to eat the ripe hay, and I am perfectly sure that it is a great loss to let timothy hay get any thing near ripe; in fact whenever it begins to come in blossom, it is time to begin cutting. If there is much to cut, and not plenty of hands, some will then get too ripe. I would prefer good wheat straw, cut before it is too ripe, to ripe timothy hay for either sheep or cattle.

A number of years ago, I built a cow house, and that season I had cut my timothy hay rather earlier than usual. I stabled my cows for the first time that year; fed them the early cut timothy hay, and took every possible care of the cattle, but they became poor, would eat but little of my green hay, and by spring the cows and young cattle were overrun with lice, and poorer by far than ever I had cattle. I concluded I had cut my timothy too green, and that my neighbors were partly right. Next season I let it get near ripe, but my cows did no better. I then concluded it must be stabling, and took out my stalls, and turned my stables into sheds. After that, my cows would get fat on green hay. After I began to fatten cattle extensively, I found out that my cow stables were not thoroughly ventilated, and this was the only reason why they did not do well in their stables.

The loss farmers sustain by letting their hay get too ripe, is immense. I would rather have four quarts of meal per day, with good green timothy hay, than to have a peck with ripe hay, to fat a steer with. Cut grass or clover green, cure in swath or cock, and it will make either sheep or steers fat in five months without grain, if they are properly attended to, but still it is more profitable to feed part grain.

I have wintered this season, about 200 sheep on wheat straw, with one bushel of oil cake meal to the 100 sheep per day, and they are now fat, although but thin when I bought them. Your truly, JOHN JOHNSON. *New Genera*, April 3, 1854.

We believe, with our correspondent, that the loss sustained by our farmers, by too long delay in cutting their grass, is immense. It is a subject to which we have frequently called the attention of our readers for years past. Both science and experience demonstrate that the proper time for cutting grass, is when it is in blossom. A writer on the scientific principles involved

in the process of hay making, lays down the following rules:—

1. Grass must be fully developed before it is mown; if not, it will be found in its early stages to contain so much water as to be reduced, on drying, into so small a compass, that it will in quantity much disappoint the haymaker.

2. It must not be permitted to stand until its seeds are formed, much less ripe. All plants in arriving at maturity have their starch and sugar and gum in large quantities converted into woody fibre—a wise provision of Providence for enabling the stem to bear the matured seeds—and as sugar, gum and starch, are nutritive elements, it is desirable that these should be preserved, and hence the point for successful grass-cutting is that between the full development of the plant and before the formation of their seeds, in other words when they are in flower.

A government report, published in the *Edinburgh Quarterly Journal of Agriculture*, on the "chemical nature of grass and hay as food for cattle," says—"If, as we have endeavored to show, the sugar is an important element of the food of animals, then it should be an object with the farmer to cut grass for the purpose of hay-making, at that period when the larger amount of matter is contained in it. This is assuredly at an earlier period of its growth than when it has shot into seed; for it is then that the woody matter predominates—a substance totally insoluble in water, and therefore less calculated to serve as food to animals than substances capable of assuming a soluble condition. It ought to be the object of the farmer to preserve his hay for winter use in the condition most resembling the grass in its highest state of perfection."

We add to the above, the testimony of several careful and observing farmers, heretofore published in the *Cultivator*:—

C. N. BEMENT—Was formerly in the habit of cutting his timothy quite late, because it was easier cured after it got pretty ripe; but he ascertained, from careful experiment in using hay thus cut that it wanted substance, and that the best time for cutting was when the grass was in blossom.

SANFORD HOWARD—The stems of grasses were filled just before the formation of the seed, with a starchy or saccharine substance. In perfecting the seed, the stems were exhausted of this substance, it being consumed in forming seed. The plant should be cut before the nutriment has passed from the stems.

W. H. SOTHAM—Would as soon have good bright straw for cows or sheep, as timothy hay cut after it has gone to seed. Cuts all his hay early. There was another great advantage in cutting early—the roots retained their life and strength better, and the after feed and future crops were made more abundant.

J. PRATT—Commences cutting his hay generally before any one else thinks of it, or as soon as it begins to blossom, and gets help enough to cut it all as soon as possible. He has kept a dairy of sixty cows for nine years, and attributes his success with his cows, and the fine healthy appearance of his other stock, mainly to early cut hay.

Since the above was in type, we have received an interesting paper from a correspondent at Mechanicsville, on the proper time for cutting, and the best mode of curing hay, which shall have a place soon, and for which the writer will please accept our thanks

On Cultivation for Grass.

MESSRS. EDITORS—I have been spoken to about writing on raising grass; I am incompetent to the task. "He is considered a benefactor of mankind, that can make two spears of grass grow where but one grew before." I would that some able pen would give the public a plain practical treatise on the best cultivation, to improve our grass, as this, in many sections, is one of the most important branches of agriculture. Our country is year by year experiencing a lack in this department, and we know not how to remedy the evil.

We are decidedly a dairy county, and inferior to but one in the empire state; as Chenango and Delaware rank but little behind Orange. It has been supposed that the superior feed of Orange, is the cause of its higher standing in the butter market; but from late observation I am inclined to believe it is not wholly that. No doubt, the larger quantity from each cow is attributable to their superior feed; but something is owing to the churning all their milk, while we only churn the cream: but I leave this part of the subject, to examine how we may get more feed for our stock. More stock is generally kept than can be kept well, and our pastures are too close fed, with the exception of a few, who show it by the extra amount of butter from each cow.

To present facts for illustration, you will excuse me if I quote from my own experience, for in so doing, the credit reverts to your valuable agricultural papers, for I was rather a poor farmer, and like many men fond of doing things in my own way; but finding that the experience of others, together with my own, was a good school, I concluded it was best to try to improve in every thing—for I found, from my stinted instruction, that by sowing four quarts of herd's grass and two of clover seed, I was constantly losing money by thin crops of grass. I began to increase the quantity, until I sowed now half-a-bushel of herd's grass and three or four quarts of clover. But just the increase of seed will not do it.

I had eleven acres of new land, a little more than a middling good barn—ten acres of it was put into wheat and rye, about two-thirds wheat, and one acre left for spring wheat. I had a good man that would try to do just as I told him; I went with him and sowed one bushel; directed him to leave no spot, until all was mellowed; to go round and round every stump until it was all dragged sufficiently to cover every kernel, before he asked me to sow any more. He came in crank at night; he had finished all as I directed. The next morning we fitted another bushel, and took it out to sow; but coming on to the dragged ground, I was quite disappointed—"Why, this is not half dragged; it will not do; you must drag it as much again." "Well if I do, we shall never get this large fallow, sowed this fall." No matter, we will do what we do well, for my motto is, "what is worth doing at all, is worth doing well," and you must not get discouraged: I will send on another team. I did so, and two teams were continued till all was sowed. The next morning, Mr. Editor, I wish you could have met me there. I have no recollection of being so well pleased with any piece of work before in my life. It did not seem possible that such a rooty, stumpy bit of ground, could have been mellowed up so much like a garden. The ten acres were all fitted in the same manner, and as much sown to wheat as could be got in, in good season, and the rest to rye. You know, and every other man ought to know, that grass must grow on this fine tilth.

I got the county premium on rye at 43 bushels to the acre; on the wheat I did not, but the average on the whole 11 acres was over 30 bushels to the acre, all owing to heavy seeding and superior tillage.

And now for the grass seed; the last of March, while snow could be had to sow it even, I took 3 hogsheds of herd's grass chaff, that had been run through the mill, and some 6 or 8 bushels of clean seed taken out, and my two men, myself in the middle, and sowed the 10 acres of winter grain all over with the chaff. We then took near one and-a-fourth bushels of clover seed, and mixed with near three bushels of herd's grass and cross-sowed the whole, coming out within a few quarts, which we had left when done. The spring wheat had about the same proportion.

When harvest came, I took the surveyor to run out an acre of wheat and rye, to enter for premium—he said he never saw any thing like it before—the grass seed being sown early, the soil so pulverized and mellow, it took root immediately, and was now much of it headed out; a good swath of grass might have been mowed. My neighbors repeated that they never saw such grass grow on new land before.

I will now give a specimen on old, worn out land. I bought a farm; when the surveyor was running it out, the former owner told him, "the farm was worn out; it used to be called one of the best farms in Coventry, but it never could be brought too again." But I will tell you how I produced a wonderful change. I took my man to set him to plowing, while I held the lines to drive three horses. We went around; he could not keep the plow in over three or four inches. "What's the matter?" (A good Dutcher plow, at that time considered one of the best.) I gave him the lines and took hold of the plow, but it seemed to scrape along on a hard substance—"get on the beam, and put it in." He did so, to some eight or ten inches, and it tore up a crust as hard as a road, about three inches thick, then came a loose and open soil. I never saw any thing like it before. It had passed through a skimming system of farming, of three-inch-deep plowing. What to do, I was at a loss. I got a large log, chained one end on the whiffletrees, the other resting along the plow beam well secured, and went on to plowing. I was hooted by my neighbors, but it did not stop me. We plowed it well eight inches or more deep—put on some twenty loads of barn yard manure to the acre, dragged it all to dust, planted with corn and potatoes, and had a very heavy crop. The next spring, put on spring wheat, and seeded with grass in the manner above described—and such grass as was never remembered to have grown on the farm before, followed. I should judge from two to three tons per acre was taken the next year's haying. This was not a solitary crop. I followed it up year after year, in this way, until now the farm is ranked among the best. I raised every year more grass seed than I wanted, and sold it from \$3 to \$4 per bushel, to my neighbors, when they might have raised their own for less than \$2.

We will look at one other mode of cultivation and seeding. I had a 10 acre lot, too far off and up hill, to be manured without much labor. It had been a pasture field, and not so badly skimmed. I had heard much said of raising oats for a number of years in succession, by plowing in the stubble and all green substance immediately after harvest. I tried the experiment: for the first year or two, the crop was fine; it then declined. My sons remonstrated with me against adopting a new system for this field. For the rest of my fields, my determined and fixed principle was, never to put but two crops before seeding down; but I was determined to carry out this new experiment. It was continued some four or five years, and then heavily seeded: and there it remains, a mark of my folly, neither fit for meadow nor pasture.

It is evident that the generality of farmers have too much land; yet all, or nearly all, want more. I know of but few farmers but who are overstocked, or at

least their pastures are kept too close fed. Mr. JULIAN, of Greene, though he keeps a hundred head of cattle, may be an exception; and I should like to have his mode of operation in print, as I believe he tills but very little, but manures very highly from the village, as well as husbands all his home manure.

Although I am not in favor of top-dressing, as practiced in our town, to the neglect of plowed crops, yet when I see a man manure his out-field, I think he had better have top-dressed his meadows. But I have already exceeded the limits of a letter. One thought more and I am done.

When we see old pasture fields with a large proportion grown over with mossy knolls, or meadows, where the grass seems run out, and barren spots appear, and the general appearance of the grass is thin, who will not be reminded that they must be torn up, a crop or two succeed, and again seeded down; and who will refuse to see that heavy seeding is the best? If all can not be immediately done, manure, lime, ashes, or plaster, must be applied. G. D. PHILLIPS. *Coventry, N. Y.*

Culture of the Ruta Baga.

EDS. CULT. AND CO. GENT.—I have been a subscriber and a constant reader of *The Cultivator*, since 1838, have them all bound, making a book some two feet deep; and if I wish any information in relation to agriculture, disease of animals, or anything else of interest to the farmer, I go to that library; also if I wish to see the time and degree of the rage of any mania, — whether Multicaulis, Rohan Potatoe, China Tree Corn, or Poultry, so large as to be in danger of eating up the children thinking them grasshoppers, I find it all there; and I trust you will excuse me when I say that I have often threatened, but never previous to this time have written a word for the Cultivator.

I will tell you my method of raising ruta бага:—Plow sward land early in September or late in May, (late fall or early spring plowing is death to Becket lands.) If the soil is weak, cart on before plowing, twelve or fifteen loads manure; green will do, and plow in. Plow but once—that leaves the sod inverted. Spread on about May 25th, about twenty ox-cart loads of manure—if a little rotted the better—harrow thoroughly. Spread on to the acre some 100 bushels coal dust or leached ashes—if the ashes are unleached 25 bushels will do. Let them be spread just before or just after sowing. Sow the seed from first to fourth June. I sow with *Emery's seed planter*, the rows two feet apart, and then the leaves will cover the ground. Sow bountifully; then you will not have to transplant. Run cultivator between the rows, weed and thin, as soon as the leaves of the Bagas are the size of a cent, thin from six to twelve inches apart, and do all the thinning the first time of hoeing, or you will not get a crop. Cultivate and hoe as often after as the weeds show themselves.

When the crop is grown, say middle of October, turn in your calves or sheep, and let them eat off the leaves; when you wish to gather, take a sharp hoe, strike the stems and tops off; clap the hoe against the side of the бага and rack it out of the ground. Take your cart, after they have lain a few hours to dry, drive along side, pick up one in each hand, rap the two together to take off the dirt, and throw them into the cart as you

would pumpkins. Be sure and watch the weather, and not let them lie in the ground after it begins to freeze; if you do they will heat in the cellar and smell bad. Mine never have yet unless frost bitten.

Follow the above directions, and if as successful as myself, your bagas will cost you from four to seven cents per bushel in the cellar. If you raise turneps feed them out before February, as they grow corky. Ruta bagas will keep well till June, and are worth more than cost to feed to stock with us. There is no better root for sheep. Yours very truly, C. C. PERKINS. *Becket, Berkshire Co. Mass., April 20. 1854.*

Saving of Labor in Sowing Plaster.

I sow plaster out of a wagon, and it is such an expeditious and labor saving, pain saving method, that I would urge the practice upon every farmer who has occasion to spread this very cheap and efficacious fertilizer upon his meadows, pastures or grain fields. And this is the way I do it:

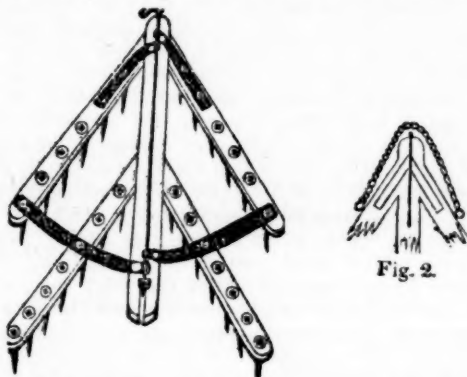
I place a quantity, say six to ten bushels of plaster in barrels or boxes in the fore part of a wagon—a one horse lumber wagon is the kind I use. Provided with a shovel and a half barrel, (a common wash tub will answer just as well,) and a boy or man to drive, we repair to the field to be dressed. The half barrel is filled and placed at the hind end, the end board removed, and seated upon a board laid across the box, with my back to the horse, I am ready to begin. The horse is started upon a moderate walk, and I distribute the plaster upon the track of my wagon for a breadth of 16 to 20 feet. A little experience will enable any one to do this perfectly. The plaster is distributed more evenly, and with half the usual fatigue. At the end of the field, your driver turns back along the side of the land previously dressed. When the half barrel is exhausted, stop and replenish. I sowed nearly half a ton on six acres of clover, last spring, in less than an hour—in less time than six men could have performed the same labor, and without inhaling half as much of the dust as any one of the six would necessarily do. I sow with either hand, as the other becomes fatigued, throwing the material high in air, and letting it fall in a cloud, rather than in lumps as happens in a greater degree where the operator is sowing from a pail. The conditions required by this method are merely a surface moderately level and smooth. Upon such ground, I should never think of sowing plaster in any other way than from a wagon.

CLOVER, POTATOES, &c.—The clover, in clay soils, was drawn by the frost last winter, to an extent I never before witnessed. The Canada Thistle appears to have suffered in the same way—proving the old adage, that there can be no great loss without some small gain. A very general destruction of potatoes in the hole, or heap, has taken place throughout the county. The usual amount of covering was entirely insufficient to protect them from freezing. Where the gain that attends this loss is to be found, I am not able to say—unless it be in the increased price to those who kept their potatoes in their cellars. They are very scarce, and bring six shillings a bushel by the wagon load, in our streets. In fact the supply of seed for planting must be very short. V. W. S. *Syracuse.*

Harrows.

May I be allowed to ask you a question: Which is the best Harrow? its form, dimensions, &c. By answering the above in the Country Gentleman you will greatly oblige, A. M. B. *Essex, Vt.*

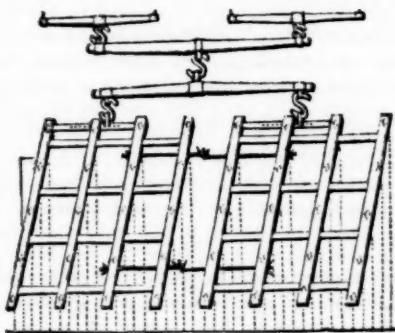
The Geddes harrow is undoubtedly the best one in use. The teeth being situated considerably back of the point of draught, its motion is more even and steady, and consequently easier for the team. In consequence of its wedge-form, it passes obstructions more readily. The center or draught-rod forms a set of hinges, by which it becomes adapted to uneven ground, or by which it may be easily lifted to discharge weeds, roots, or other obstructions. Or it may be doubled back and carried easily in a wagon. The accompany-



The Geddes Harrow.

ing figure renders its construction perfectly intelligible without further description. To prevent its rising in the middle, as it has been found to do when the draught traces are as short as easy draught requires, the chain is attached to the bar on each side, as shown in Fig. 2

The Scotch or square harrow, when made of light timber, and numerous furnished with small teeth,



The Scotch Harrow

is a capital implement on land free from stones for fine pulverization.

An improvement, at increased cost, is made in Harrow-teeth by passing the upper end of the teeth through from below, until they reach a shoulder and washer, when they are secured with a nut on the top. Harrows will run easier, if the corners, and not flat sides of the teeth, are placed foremost, so as to cut like a wedge. We do not see why cast-iron teeth for coarse harrows might not be adopted, made flat, and cutting with the sharp edge.

Bone Dust.

MESSRS. EDITORS—I write you for information about bone-dust. In what way should it be applied to corn? Will bones that have been lying on the ground for a long time, answer? How fine should they be ground?—also the superphosphate of lime—what is its cost, how should it be applied, and where can it be got at the most reasonable rate? A GENESEE SUBSCRIBER.

For the purpose of trying its specific effect, bone manure should be applied alone and well mixed with the soil; for all other purposes, it operates best by forming a constituent of compost, made of stable manure, turf, peat or loam, and a small proportion of ashes. Old bones contain the same fertilizing ingredients as fresh bones, except a part of the gelatine has disappeared. The difference is very slight. The finer they are ground the better. Unbroken bones will remain in the soil for centuries, and as a consequence they impart but little benefit to any crop; as the fineness increases, the more rapidly they act, till reduced to the nature of flour.

The super-phosphate is sold for about \$45. or \$50 per ton in New-York, at several establishments. It should be applied in the same way as ground bones. Our correspondent will find some further information on this subject on p. 24 current volume of the Country Gentleman, or p. 52 of the Feb. no. of the Cultivator.

Coal Tar and Paint.

MESSRS. EDITORS—Having read in your valuable monthly paper, something in relation to the use of coal tar for the roofing of buildings, I wish to know whether this will preserve the siding of a barn as well as paint and oil; and if so, which is the cheapest in the end—or in other words, how much the cost will be per hundred square feet, and where it can be obtained. Please give me the desired information in your next number, and you will confer a great favor. A SUBSCRIBER. *Carlisle, April, 1854.*

Coal tar is an excellent preservative of wood exposed to dampness, probably quite as much so as paint, and when applied warm on a well dried surface, more so. There are two objections of considerable magnitude to its use,—one, its black and disagreeable color—and the other the large amount of solar heat absorbed by this color, producing warping and cracking. It has been proposed to lessen this evil by mixing it with whitening or yellow ochre, but we do not know the result of experience.

Coal tar is very cheap, the price varying with the demand, but not often over 2 or 3 dollars per barrel, and it may be had at any of the gas works used for lighting cities.

PUTNAM CO. AG. SOCIETY.—The annual fair of this Society for this year, is to be held at Carmel on the 26th and 27th of Sept. Their premium list, we are glad to see, embraces quite a number of agricultural works, including a goodly number of copies of the *Country Gentleman*. The officers of the society are—

President—THOMAS B. ARDEN, Philipstown.
Vice-Presidents—Leonard D. Cliff, Carmel; John M. Townner, Patterson; Coleman Townsend, Kent; Thomas Drew, Southeast; Ezekiel Hyatt, Putnam Valley, and H. A. Pelton, Philipstown.
Secretary—G. Mortimer Belden, Carmel.
Treasurer—Saxton Smith, Putnam Valley.

Lightning Rods.

Our correspondent, E. L. of Greenville, Tennessee, requests information on the essential requisites of a good lightning conductor to his barn, 90 by 54 feet—a subject on which he has found conflicting theories, and contradictory information.

This subject is often unnecessarily involved in a great deal of mystery, and as a consequence many useless directions are given. We shall therefore very briefly point out what is requisite in a good conductor, that our correspondent (as well as others) may know precisely what is wanted.

1. *Sharp points at the top, to draw off the electric fluid silently.* When a rounded knob is made to approach a highly electrified body,—as every one familiar with the use of the electric machine knows,—the fluid passes to the knob in the form of an explosion, as soon as the knob approaches within a certain distance. This distance is longer as the charge is greater. But if a sharp point is made to approach the charged body, the fluid is drawn off silently in a stream, with no explosion whatever, and at a greater distance than its passage could be effected between balls or blunt surfaces. Hence the very great importance of sharp points at the upper end of the rod—drawing off the lightning from a highly charged cloud, safely and silently, while the cloud is yet at such a distance from the building as to preclude the danger of striking. Where, however, the cloud is unusually loaded with electricity, and approaches very rapidly, the point may be insufficient to drain the whole, and an explosion, producing heavy thunder, may take place. This may be prevented, at least in a great degree, by several points at the upper extremity of the rod, all of which may operate together. The same effect will be produced whether these points are within an inch of each other or a foot asunder. Some years ago, we examined a rod having but a single point, just after a terrific clap of thunder which followed instantaneously the flash, and we found that the point, which was tipped with thin silver, had been melted, iron and all, into a ball the size of a lead bullet. Portions of the building were very slightly splintered; and without the rod it would have been doubtless torn to pieces. Had there been several points, it is probable none would have been melted; and possibly the explosion might have been less severe. As it was, the largest cannon would have been a mere pop-gun to it.

It is not necessary that the point be tipped with silver, gold or platinum; if filed as sharp and bright as a needle, it will remain so many years, and never become dull enough to cause damage.

It is said that soon after the Revolutionary war broke out between England and America, and after Dr Franklin had made his electric discoveries, certain officials of the British government, unwilling to acknowledge their indebtedness to the Yankee, substituted knobs for points, which brought out the following epigram:—

While you, great George, to show affront,
Your sharp conductors change to blunt;
The nation's out of joint;
Franklin a wiser course pursues,
And all your thunder fearless views,
By keeping to the point.

2. *A sufficient height above the roof of the building.* It is said that lightning has never been known to strike within a distance from the rod, twice as great as the height of the rod above the building. Or in other words, a rod will protect a circular space whose diameter is four times as great as the height of the point. A barn forty feet long would therefore be safe with a rod at the middle ten feet above it; or with a rod at one end twenty feet above; or with a rod at each end, ten feet above. A barn 90 feet long, like that of our Tennessee correspondent, would require a rod at the center, or at each end, 22 feet high above the roof. Or, a rod might be placed 22½ feet from each end, only eleven feet high, and be equally efficacious. These two rods might be connected by a horizontal one to a larger one at the center running down into the earth.

3. *A continuous connection throughout.* The best rods are welded together in one piece. But where this is inconvenient, the two parts may be screwed together with each end into one common nut; or they may be placed side by side and riveted, or screwed together. The connection is as complete, so far as thunder and lightning are concerned, by two surfaces in actual contact merely, as if welded together. The only precaution in this case being to secure the connection from any accident which might after a lapse of years produce a separation, and which would immediately make the rod worse than no rod at all, by attracting the fluid, without a provision for its escape to the earth.

4. *Entering the earth several feet at the bottom.* However perfect every part of the rod may be, it will do more harm than good, unless the fluid can pass off with perfect facility and become dissipated in the earth. Moist earth is always a pretty good conductor; dry earth is a poor conductor. It is therefore highly requisite that the rod descend deep enough to enter the permanently moist stratum, or the portion that remains moist independently of the drouth of summer. This will of course vary in different places; but as a general rule, a hole at least six feet deep should be dug for this purpose. It will greatly assist the dissipation of the fluid by placing in the bottom of the hole, in contact with the rod, at least half-a-bushel of common charcoal, which is an excellent conductor.

Some rods, perfect in other respects, become worse than useless by not sinking deep enough. Some years ago, a meeting-house was struck with lightning, although furnished with what appeared to be an excellent conductor. The building was injured, and the earth torn up around it. On examination, the lower end was found to enter the earth but a short distance, and the season being very dry, and the soil destitute of moisture, no escape was afforded for the electric fluid.

5. *The size of the rod should be sufficient to carry off any discharge without becoming heated, as would be the case if too small.* Three fourths of an inch would doubtless be enough in any case whatever. The portion above the building must however be stiffer, to withstand stormy winds, especially if it rise many feet above the roof. We have found the best way by welding together three or four pieces of different sizes, placing the larger below. This gives the rod a gradual taper to the top. The larger portion should extend down far enough to admit of thorough stiffening.

6. *The proper mode of fastening to the building,* is very imperfectly understood. The electric fluid always takes the best conductor, and will not pass into wood or other imperfect conductor, so long as it can find a ready escape through metal. The discharge from a machine severe enough to knock a man senseless, may pass unfelt through a metallic rod held in the hand, provided the escape through the rod is perfect and unimpeded. So, there is no danger of the fluid passing into the building through wooden supports, so long as there is a ready communication to the moist earth below. Nothing can be more absurd than the common practice of passing the conductor through

glass rings, supported by large iron staples. For, in the first place, a *very small* discharge would leap over the glass from the rod to the staple; secondly, the glass, when wet with rain, is no insulator at all—is perfectly useless; thirdly, the staple, with its sharp points driven into the building, serves to direct the current from the rod to the building, whenever there may be an excessive discharge. No support is better than seasoned and painted wood—an incomparably poorer conductor than iron, and not presenting the slightest chance for any considerable portion of the electricity to enter the walls. An auger-hole is bored for the passage of the rod. As a matter of precaution in extreme cases, it is best to have the wooden supports project about half a foot from the walls, so as to hold the rod off at that distance. In the instance we have already related, of a rod being so heavily charged as to melt the point into a ball, not the slightest effect was visible on the wooden supports which held the rod in direct contact.

By observing the preceding directions, any farmer may employ a common blacksmith, and erect his own rod properly, without paying double price to itinerant rod-erectors, who often do not understand their business properly. Procure three-quarter inch rods; weld them or screw them together; let the part above the building be stiffer, and tapering; weld together a few smaller sharp pieces for points at the upper end, and file and polish them sharp; dig a hole six feet deep at the bottom; throw in a bushel of charcoal before filling it; secure the rod to its place by passing it through holes in wooden supports, and nail them firmly to the building, and the thing is done.

Nitrate of Soda as a Fertilizer.

In consequence of the high price of Peruvian guano, and the danger of having an inferior or adulterated article imposed upon purchasers, experiments have been extensively made to determine the manurial or fertilizing qualities of other articles. Nitrate of soda is one of these articles which have been subjects of experiment. It has been ascertained to be an excellent top-dressing for wheat, and for this purpose a much cheaper fertilizer than Peruvian guano. From the application of 100 pounds of nitrate of soda and 200 pounds of salt to an acre, there has resulted an increase in the crop of wheat to which they were applied of about six bushels. This, at the present price of wheat, would be productive of a large profit. And even at lower prices for wheat there would be a profit over the cost of the nitrate of upwards of 100 per cent. when an increase of five or six bushels to the acre was realized from its application. In Norfolk, (Eng.) where nitrate has long been applied as a top-dressing to wheat, the *average* increase is said to be five bushels per imperial acre. As such profits may lead many to make use of this fertilizer, it may be well to say that it must be bought with caution, as it is easily adulterated with common salt.

Nitrate of potash has also been tried as a fertilizer. It seems to possess fertilizing qualities equal to those of nitrate of soda, or superior as being more lasting in its effects. Those who have tried both these nitrates would prefer the nitrate of potash, if it could be had at the same, or nearly the same rate. In the London market, the nitrate of soda can be had for about £22 or \$110 per ton of 2240 pounds, while the nitrate of potash or common saltpetre is put down in price currents at £33 or \$165 per ton.

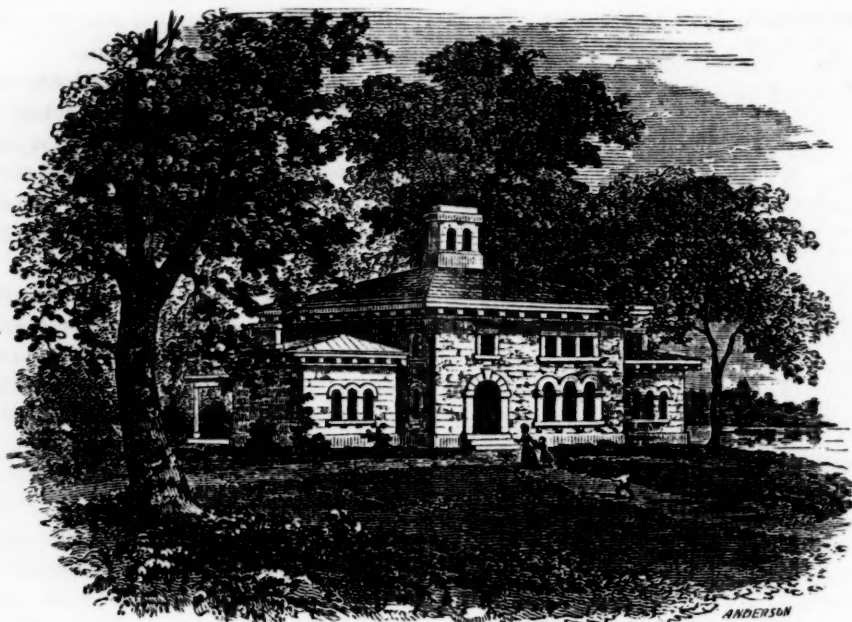
Sulphate of ammonia has also been tried, and found of good quality as a top-dressing.

Our brethren of Great Britain who have used the above fertilizers the most and the longest, think that they produce a better result when combined with a proportion of common salt, varying from 1 to 3 cwt. per acre. It is thought that this prevents the straw from being lodged, particularly if the season should be wet or moist.

A question having arisen as to the nitrates of soda and potash, viz: whether the acid or the alkali in these salts was the source of the fertilizing action, several experiments have been made in Great Britain in order to determine it. The experiments of Mr. PUSEY, which we find in the North British Agriculturist, seem of a very decisive and instructive nature. We shall attempt therefore a brief synopsis of them, as they seem adapted to suggest new trains of thought and experiment, which may lead to improvements or economies yet undiscovered. Mr. PUSEY reasoned in this way in arranging his experiments: The nitrate of soda when applied to grass produces a very vivid green and a rapid growth. Whichever, therefore of the two component parts of this substance, viz: nitric acid and soda, used side by side with itself, shall produce the same vivid green and the same rapid growth, must clearly be the active principle of the salt.

Accordingly in Sept., 1853, he commenced the experiment by trials to determine how much the nitric acid needed dilution to prevent its burning the grass. He thus found that from 2 to 8 fluid drachms of nitric acid in a pint and a half of water, produced the best effects, almost equal to the nitrate of soda, though the strongest of these mixtures scorched the leaves of the grass, but afterwards brought up a new crop of rich green leaves from the uninjured roots. He next applied nitrate of soda, 6 drachms in 3 pints of water, to an area of 5 feet square, and 4 drachms of nitric acid in 3 pints of water to another 5 feet square, and on similar patches solutions of soda, of potash, and of ammonia, in the state of pure alkalis, and found that if the effect of nitrate of soda were denoted by 10, the effect of the nitric acid was about 8, of the ammonia or hartshorn about 5, and of the soda 0. Another experiment was made the next day, in which potash was used in the place of soda, and the same, or very nearly the same, results were obtained, neither the potash nor soda in their alkaline or uncombined state having any perceptible effect on the color or growth of the grass. On the other hand, wherever the diluted acid was sprinkled, it was followed by a dark luxuriant vegetation. These experiments have rendered it certain, or highly probable, that chemical fertilizers strengthen vegetation very much according to their contents of nitrogen.

This law sheds a light over many scattered, or heretofore little connected facts. The most dissimilar substances—woolen rags, soot, sea-weed, &c., &c.—are applied as manures, but all these refuse matters agree in containing nitrogen undeveloped. The nitrogen in fish, rags, &c., may assume one or other of two forms in the soil. United with hydrogen, it will form ammonia, and united with oxygen it will form nitric acid. Those experiments render it probable that an opinion advanced by Dr. VOELKER, the distinguished chemist of the best agricultural school in England, may be correct, when he said that “plants in general are more dependent on nitric acid, as the source from which they derive their nitrogen, than upon ammonia.” On soils containing lime, nitrogenous manures are converted into nitric acid more readily than into ammonia.

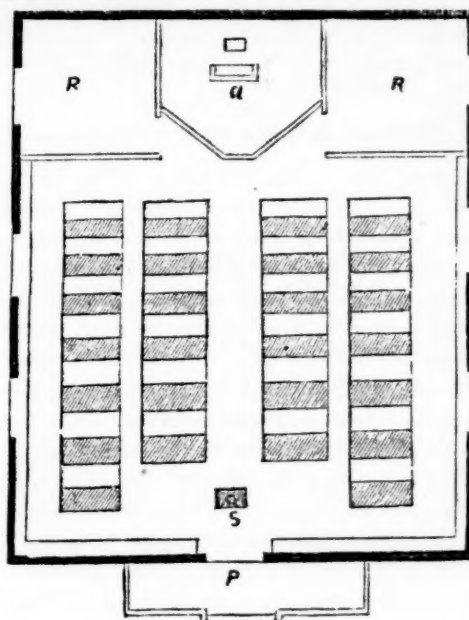


Construction of School Houses.

EDITORS COUNTRY GENT.—In a poor and thinly settled district, we are anxious to build a school-house. Will you furnish us the design of a common, cheap school-house, the cost not to exceed three or four hundred dollars, and accommodating about thirty-five or forty scholars. For the internal arrangement we want the latest and most improved style. In *The Cultivator*, vol. 7, p. 396, and vol. 9, p. 75, we have designs; but the expense is beyond the ability of the district. J. B. MASTEN. *Rouse's Point, N. Y.*

The subject presented by the inquiry of our correspondent, is one of deep interest, and worthy of the serious attention of every citizen. Thousands of dollars—we might almost say millions—are yearly wasted in the erection of unsuitable school-houses, which most commonly answer the purpose but very imperfectly, and are not unfrequently a great waste of money by bad arrangement. State governments could not better apply a little money than by publishing a small, well prepared pamphlet on the erection, arrangement, and furnishing of the cheaper district school-houses, and sending a copy to every district.

The internal structure of a small house is exhibited in the accompanying plan. The teacher's desk *a*, is on a raised platform; the pupil's desks are in front of this, and occupy the center of the room. The principal aisle runs through the middle, separating boys and girls; this should be four feet wide; the two smaller, on either side, need not be more than twenty inches wide. Each pupil is provided with a seat and desk, two pupils occupying side by side the same double seat—a greater number should never be placed together for several reasons, one of which is, the inner ones cannot leave their seats without disturbing their neighbors. The smaller or narrower seats and desks, for the smaller children, are placed nearest the teacher; these seats are about nine inches in width and ten and-a-half high, with desks twelve inches wide and twenty-one high. The larger seats are eleven and-a-half inches wide and fourteen inches high, with desks fifteen inches



Plan of Floor.

wide and twenty-seven high. Every desk should be numbered. The stove is placed at *S*. *R R* are the recitation rooms, one of which may be used for the smaller children, and the other for more advanced classes. If the teacher has one or more assistants, these rooms may be separately partitioned off, or the partitions may be left open next the teacher's desk, but shut off from the rest of the school, or with sliding doors, so that he may hear one of the classes from his seat. Or if only one teacher is employed, there need be no partitions, and the same places occupied by the reciting classes; or, one of these rooms may be used for a library, &c. Each room should be furnished with blackboards, and now that clocks are so cheap, no school should be without one, to be placed over the teacher's desk. Outline maps may be hung on the partitions of the recitation rooms. The entrance porch *P*, may be used for hanging up caps &c., and it should

if practicable, be large enough to contain wood. If a good well of water and pump could be added, it would be a great improvement. In some places conveniences for washing will be important.

The windows are placed on the two opposite sides—this arrangement lights a school-room to the best advantage, and prevents that confusion of light where windows are on three sides.

For children who are compelled to sit several hours during a day, (which is sufficiently irksome and unnatural, to say the best,) easy and comfortable seats should be provided. Sitting long is harder for children

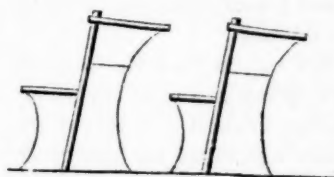


Fig. 2.

than for adults; but few of the latter would be willing to sit so long, even for *one* day, to say nothing of repeating it for months.

Fig. 2 represents the simplest mode of making seats and desks, yet has an important improvement, by giving a *slope* to the back of the seats. Fig. 3 represents a more finished desk, which may be adopted for larger pupils—the seats and desks being separate, there is less interference with those sitting behind. Each desk has two chairs, consisting of round plank fastened to a cast-iron support, strongly screwed to the floor. The backs are made of three slats, screwed to the seat and fastened into a cross top piece. We have already given the dimensions of these. They are becoming commonly used. The desk lids should always open above as none can be kept neat without.

A seat runs round the room on three sides next the walls, not commonly, but sometimes needed. The other seats connected with the desks, are sufficient, in the plan, for 52 pupils, and may be increased or diminished without altering the general arrangement. A

house 24 by 28 feet will contain the accommodations here represented, and if built one story high with *arched ceiling*, with vertical boarding and battens, need not cost more than our correspondent's estimate. It should have something of a tasteful exterior, for to children, lessons in neatness, taste, &c., are quite as important, even in an economical and practical point of view, as chemistry and algebra. The accompanying figure represents the mode of building we have recommended, presenting a handsome exterior, and a tasteful architecture, of the simplest Italian cast. For a house built of brick, and of a more costly character, the engraving at the head of this article represents a handsome specimen, the wings serving for recitation rooms.

The great leading and most essential requisite in a school-room, we have not mentioned. This is, to place the seats fronting towards the north, so that



the outline maps may be suspended on the north side of the room,—and that first impressions of north and south may be correct. Unless a child sees a map for the first time placed in the right position, every thing will be turned round through all the rest of his life. The writer of this article would be willing to give two hundred dollars to-day, if he could have had his first impressions correct in this particular.

Winter Apples and Pears.

EDS. COUNTRY GENT.—In a late number of your journal, it is stated that for winter, the Rhode Island Greening and the Baldwin are unquestionably the two best market apples in America. This is probably true for the climate and soil of New England and parts of New York, but the Baldwin is not a good winter apple in this neighborhood. We live near the Seneca Lake, which never freezes, and hence our season is about two weeks earlier than many places twenty or thirty miles distant. This is probably one reason for the failure in part, of the Baldwin, which grows very large and fair, but ripens too soon. The winds of the early autumn cause large portions of them to fall from the trees, and they soon decay. To test their keeping qualities, we have carefully picked the remainder from the trees, but have rarely succeeded in keeping any beyond the first of January. This has been our experience with the Baldwin for three years. A friend living a few miles distant says he has had a similar experience with it. My brother, who resides in Tazewell county, near the center of the State of Illinois, has discarded it, and grafted his Baldwin trees with other fruit.

The Rhode Island Greening, Esopus Spitzenburgh, Swaar, Northern Spy, Tompkins County Winter King, and Talman Sweeting, we prize the highest, out of some twenty, of the most popular kinds of winter apples which we have growing. The two first are the most greedily bought, because their good qualities are well known.

Why are not winter pears cultivated more for market? Assuredly they might be rendered very profitable. We spent several days in New-York and Albany about the first of March, without seeing a winter pear offered in market. We think that if good winter pears had then been offered in the New-York market, they could have been readily sold for one shilling each. A Flushing nurseryman told me that he had often seen the Bartlett pears sold in the fall, for ten and twelve cents each, at retail, and at six cents each by the quantity. Yours truly, S. B. BUCKLEY. West Dresden, N. Y., April 19, 1854.

"Tomkins County King Apple."

LUTHER TUCKER, Esq.—I perceive in the February number of "the Genesee Farmer," some "remarks upon the King Apple," by my friend Mr. JAMES MATTISON, in which he gives what he no doubt believed the true history of its introduction here.

Deeming it important that its correct history should be given, I send you the following account of it, which I had from Mr. JAMES LETTS, previous to his death.

It originated in Mr. Harrison's orchard, in Essex county, New Jersey, where also the celebrated Harrison cider apple originated, and was named by Mr. Letts, "*the King Apple*."

Mr. Letts removed to Tompkins county in the year 1800. In February, 1806, he returned to New Jersey on business, when he procured some scions from his favorite tree, which was then on the decay. He brought them home, and set two of them for Mr. Jacob Wyckoff in Jacksonville, town of Ulysses, and the remainder for himself. One of those he set for Mr. Wyckoff lived; those for himself all died, leaving one graft only to fill the world with one of the most beautiful and best apples now known, for when Mr. Letts returned to New Jersey the next year, the original tree was dead, and no one had grafted from it but Mr. Letts.

The King Apple tree is a fast grower in both nursery and orchard; it makes in the orchard, a most beautiful wide-spreading top, with large dark green leaves, strong branches, rather drooping when loaded with fruit. An abundant annual bearer—requires but little pruning, hardly long lived wood.

The tree grafted by Mr. Letts for Mr. Wyckoff, is now 48 years old, and as sound and thrifty in appearance as any young tree in the country.

Fruit—rounded, sometimes a little flattened, slightly tapering towards the eye; skin smooth, covered with stripes of a rich lively red on a yellowish ground work, filled in with imperfect stripes and slashes of red, becoming almost entirely red in the sun.

It undoubtedly belongs to the family of Spitzenburghs; is a mild pleasant tart, tender, with a rich perfumed flavor. In eating from 1st of December to May. JOHN H. STOUT. *Trumansburg, March 24.*

CHEAP GRAFTING WAX.—A. NORTON, of Sandy Hill, N. Y., states that he has found the following to be the best grafting wax he has tried. The large portion of rosin lessens its price, and at the same time renders it very adhesive, when warm, both to the hands and the stock, so much so as not perhaps to be conveniently applied in any other way than that recommended by our correspondent.

Seven pounds of rosin, two of tallow, one of beeswax, to be melted under water, and then worked and stretched under cool water, when it will be ready for direct application.

TOMPKINS COUNTY KING APPEE.—Of this apple of which we gave a description last week, Mr. Hovy, editor of the Magazine of Horticulture, in his April number, says: "It is a very superior variety, somewhat resembling in general appearance, the Hubbardston Nonsuch, but even larger than that fine variety, and keeping till February. It is well worthy of very extensive cultivation."

Save Your Locust Trees.

EDITORS OF THE COUNTRY GENTLEMAN—No finer tree grows than the *Yellow Locust*, formerly so abundant, now so uncommon. Scarce one stands at present, where a few years since they flourished by scores. Their rapid growth and graceful foliage made them favorites, but their mortal enemy, the *Borer*, has pretty much extirpated the old stock, while few or none continue planting. And yet they may be raised with a little attention, and I want to tell your readers, "and the rest of mankind," how.

A few years ago, a few sprouts from the roots of some old Locust stumps, sprang up around my house, and in two or three seasons, attained a height of six to ten feet. Three years ago, about the middle of May, or just as the buds began to break, I noticed one warm day, that the sap was oozing in a dozen places along the stems of my trees, and was attracting quite a number of the large fly that makes its early appearance in spring. Taking out my knife, I shaved off a thin pellicle of the bark whence the juice was issuing, and then discovered for the first time, the larvæ of the borer just commencing his operations. To dislodge a dozen from their winter quarters was but the work of a few minutes. I then examined all my trees with like results. A second examination, a few days afterwards, enabled me to *disbark* the remainder of the rascals that escaped my first observation. On a half dozen trees, but one or two finally got into the wood, and to follow them up with gimlets, nails, knives and other means of assault, was more trouble than the destruction of two or three score at the beginning of the war.

For three seasons I have protected my Locusts in this way. Not a borer is spared. I could take them out of a hundred trees in a half-day. My trees, of course, thrive beautifully. None others do in this neighborhood. My largest are four or five inches through, and 15 or 20 feet high. Any person desirous of introducing the Locust to their lawns, or about their dwellings, will, by following the directions I have indicated, be able to do so with perfect success.

I would add, while on this subject, that in watching the habits of this pest and its progenitor, the *Clytus pictus*, I discovered that it was hatched in the fall, and may be found as a very small grub, just under the bark in October, but it makes no attempt to pass into the wood until the ensuing spring, and furnishes but the slightest external signs of its presence until that period. The egg is deposited in the crevices, or when the dead bark is cracking and peeling off, and by the rough spots occasioned in trimming the young trees. They will rarely be observed above the height of six or seven feet from the ground.

LARGE GROWTH.—A sprout upon a *Paulonia*, standing in my garden, made a growth during the season of 1853, of *sixteen feet and one inch!* The tree is four or five inches in diameter at the base, and the new growth, entirely spontaneous, and promoted neither by trimming, trenching or manuring, commenced at a point about six feet from the ground. May I not exclaim triumphantly: "*Beat this who can!*" V. W. S. *Syracuse.*

The Kitchen Garden.

CULTURE OF THE ONION.

In compliance with the request of a correspondent for accurate and reliable information on the culture of the onion, we have obtained the following statement from AMOS R. COLE, of Perinton, N. Y., who has had much experience in the field culture of this crop, and who has been more successful than any other person within our knowledge:—

DEAR SIR—The following are answers to your inquiries in the order in which you have made them:—

1. What is the best soil, and best manure for onions?

Of all the different soils, I could not name the one best adapted to the culture of onions, but we have always found a light sandy loam preferable, the darker the sand the better. The manure should be fine from the stable, put on in the fall, and we use leached and unleached ashes, mixed, well harrowed in after plowing before sowing, say 8 loads per acre. The manure, unless very fine and well mixed with the soil, is often a great obstacle in hoeing. We use little or none except in the fall and exposed to the action of the frost.

2. How prepared when sown.

We plow early in the spring about seven inches deep, harrow well, then rake thoroughly, freeing the surface from weeds and lumps. Sow as early as the weather will permit, with a good hand drill.

3. Distance of rows, distance in rows of seed when thinned, how often hoed.

We prefer about 14 inches between rows. Set them in rows when thinned from 1 to 1½ inches, many prefer 1 inch. We go through the rows, when the plants first make their appearance above ground, and cutting close leave them pretty free from weeds. Then weed thoroughly, by placing a hand on either side of the row, and with the thumb and ball of finger remove the weeds gently from the side. It depends on the land as to number of times of hoeing, whether weedy or not. But in all cases they should be hoed, and if necessary, weed whenever weeds appear which would be likely to check their growth.

4. How much seed per acre, usual amount of crops?

We usually use about 6 lbs., many say from 4 to 5 lbs., but this is rather a small amount, especially if any of it should not germinate, and very few persons after preparing their ground properly, would object to the additional quantity of seed when they consider that it is often rather uncertain, and should they sow a small amount of seed they must have a small crop. From 5 to 600 bushels is a good crop, though we have grown 368 bushels on a single half acre; about 500 or even 450 would be a very good yield.

We have a way of testing the seed by placing about a spoonful of seed in a small vessel and pouring on boiling water, and if the seed is good it will sprout in 15 or 20 minutes. If not it is worthless. The plants will also come quicker (and in advance of the weeds,) if all the seed were soaked. They must however be thoroughly dried, or they cannot be sown by a drill.

MELONS AND CUCUMBERS.

Melons and Cucumbers require similar treatment. The best way on all heavy soils is to dig out holes about 18 or 20 inches deep and wide. Fill these holes about two-thirds their depth with fresh manure, finishing with light or sandy soil, made rich by a mixture with well rotted manure and fine garden mould. The hills should be raised about six inches above the surface, and be six feet apart. Plant the seeds on these mounds; and as soon as they are large enough to be out of the way of insects, thin out to four in a hill. Buist recommends that when the plants have made four or five rough leaves, the points of each shoot should be pinched off, as it will make them branch out and fruit earlier.

WATER MELONS.—The following statement of an experiment in the culture of the water melon, was furnished us for publication in the old Genesee Farmer, about twenty years since, by Dr. Stephen Mosher of Cayuga county:—

My first trial was on a new piece of sward ground which was plowed for the purpose of forming a garden. On this I had drawn three loads of fresh stable manure which was thrown into one heap, and covered with inverted sods to the thickness of six or eight inches, in the form and manner of covering a large potato hill, which was when finished perhaps four feet high, and ten feet in diameter. On four sides about half way to the top, I made four excavations through the turf and into the manure about eight inches in depth and diameter, partly filling the holes with fine rich earth so as to form four level hills. In each of these I planted five or six watermelon seeds of what we call the Carolina variety, at the same time that I planted about four square rods of the ground surrounding the heap, at the usual distances, with the same kind of seeds. Within three days, the seeds on the mound came up and grew most luxuriantly, while those planted in the adjacent ground, did not come up in less than fifteen days. During this time, the weather was unusually cold for the season; and though several frosts occurred yet the plants were not damaged in the least. When those on the level ground came up, pale and sickly,—each of the former had four large green leaves.

The result was, these four hills planted on the mound soon began to run, and took possession of nearly the whole four square rods, against which progress those on the ground made but a feeble resistance. And from these four hills I am sure I had a good wagon load of as fine melons as I ever saw. From one single plant alone I weighed five melons that overran twenty pounds each, one of them weighed twenty-five pounds; and on the same vine were more than that number of smaller size. The produce of those planted round the heap was small and of little value.

STRIPED BUGS.

Many nostrums have been recommended for the destruction of the striped bugs which often prove so injurious to melons and cucumbers. The best way to protect these and other plants requiring protection is cover a simple square wooden frame of convenient size, with cheap millinet, and then place it over the hills, pressing it into the ground so as completely to exclude winged insects and worms which crawl upon the surface. The bugs may also be effectually destroyed by the thumb and finger; going over the plants two or three times a day, if persevered in for a week or two, will effectually preserve the plants.

Transplanting Evergreens.

MESSRS. EDITORS—Will you or some of your readers, inform me of the proper time and manner of transplanting evergreen trees, such as spruce, balsam, and others of that species—also whether apple trees that are root-grafted, are as fruitful as those of top-grafting, and the best method of treating apple trees that have too large tops and long limbs, say trees eight to ten feet in height? W. S. J. Otego, N. Y.

The proper time to transplant evergreens is in the spring when other trees are transplanted, but as they do not start quite so early, the operation may be deferred a little later. The practice, so often recommended, of doing it in summer, is copied from the English and Scotch mode, where their humid climate enables them to perform operations not at all suited to this country. It sometimes has happened, however, when everything has proved favorable, that summer planting has proved successful.

There is one simple rule to be observed in the removal of evergreens, which will in all cases insure their success; and without its observance, failure will generally be the result. This is *the removal of a portion of the soil with the roots*. We have never known a white pine to live with denuded roots: and never a failure when a ball of earth was taken with them. The earth need not be frozen—it is easier to take it up if not frozen. Balsam firs, and some other evergreens or more successful removal, where grown in swamps, cannot be taken with earth; in this instance, it is absolutely necessary to preserve the roots from becoming dry for a moment, even the outer bark, by instant immersion in mud or wet moss.

Western cultivators have had a long controversy whether root grafted apple trees will bear as well as others—and many apparently decisive cases have been given on both sides. For trees equally thrifty, we do not believe there is any difference whatever. We have had hundreds of young root-grafted trees bear in the nursery rows, as young as those budded or "stock-grafted."

To reduce the tops of trees, cut back and thin down, by cutting off the branches where side-branches strike off, so as not to leave stumps.

Apple Insect.

I have lost several choice young apple trees by the depredations of an uncouth white worm, much resembling the grub which infests the peach tree at the surface of the ground. It insinuates itself under the bark, a few inches from the ground, feeding ravenously upon the inner bark, leaving its excrement like discolored saw-dust in its track; and frequently, before I have been enabled to detect its presence by any change in the exterior appearance, large patches of the bark are killed, and the trees sometimes nearly girdled.

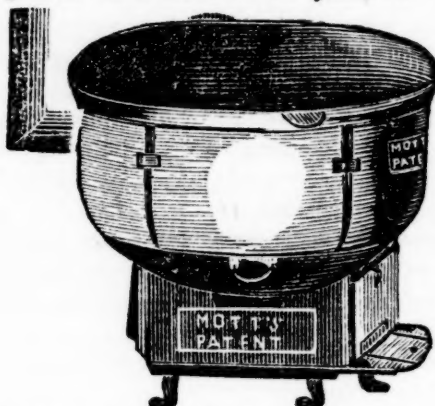
Know you anything of the villain's antipathies, habits or lineage? or have I not sufficiently indicated his "ear marks." M. L. FITCH. Paw Paw, Mich.

We know of no insect of the habits described by our correspondent. It cannot be the Borer, because the latter penetrates the wood. Insects usually understand botanical distinctions, and hence we should not expect

the peach grub to make the blunder of mistaking an apple for a peach. There appears to be quite a similarity in the mode of operation of the peach worm and this newly discovered insect; and it is not improbably a species of *Ageria*, distinct from the *exilis* or peach worm. Dr. HARRIS discovered another species, inhabiting the pear and confined to its bark, but not existing to much extent, and this may be similar in its character. All these conjectures are derived from the habits, as we are not furnished with an accurate description or with the perfect insect,—which may be obtained by placing the cocoons under a covering of gauze.

Agricultural Boilers.

I would like to know through the *Country Gentleman*, where I can obtain the best Agricultural Boiler for cooking feed for stock, with the price of one of 30 or 40 gallons. D. P. BAILEY. Fairfield, Vt.



Probably the best is *Mott's Agricultural Furnace*, which has been extensively used for several years past. It is wholly of cast iron, the stove and boiler being connected together, and the whole being quite portable. The fire passes around the boiler, through a thin space surrounding its entire outer surface, and a very small quantity of wood will heat a large body of water, requiring not over *one-third* of the fuel needed for a kettle set in a common brick "arch." Probably these boilers may be had at most of the Agricultural warehouses, but we do not know the price.

For cooking on a large scale, a steam boiler and tight box or vat, will be most efficient and economical.

VINEGAR FROM BEETS.

Will you or some of your correspondents give a receipt for making vinegar from the beet root, and also from the stalks of rhubarb or pie-plant. I have read and paid for the *Cultivator* for more than ten years excepting the last volume, and I believe that this is the first time that I have asked for information through its columns. I feel lost without the *Cultivator* even here among the golden hills of California, and enclose you a dollar for the last and current vols. N. E. CHAFFEE. Columbia, California, March, 1854.

The following is the mode usually practiced:—Grate the washed beets, express the roots in a cheese press, or other press of similar character, and place the liquor in a clean barrel, covering the bung-hole with gauze, and place it in the sun. In a few weeks the fermentation will have advanced sufficiently to produce good vinegar. It is said one bushel of sugar beets will

make five or six gallons of vinegar, nine-tenths of the root being liquid constituent, each bushel containing about six gallons in measure besides the interstices. Doubtless the same process might be adopted for the root of the pie-plant, although it is too valuable at the east for destruction in this way.

Importation of Cattle for Livingston County.

The Evening Journal of this city, states that Messrs. BROOKS & FULLER, agents for a company of farmers in Livingston county, have purchased in England a very fine lot of Short Horn cattle, and shipped them from Liverpool in the ship Sultan early in April. The cattle are from the very finest herds in England, and will do credit to the gentlemen who have selected them, and prove of great value to the enterprising farmers of Livingston. Among them is a fine young bull and eight heifers from the herd of Mr. J. S. TANQUERAY of Hendon, Middlesex. The former is a son of the celebrated bull "Balco," bred by Mr. BATES, and now owned by Messrs. BECAR & MORRIS of New York. The heifers are choice specimens from Mr. TANQUERAY's herd, and some of them are in calf to the "Duke of Gloucester," whose portrait and pedigree were published in the *Country Gentleman* of April 27. In addition to the above were seven cows and heifers from the herd of Mr. BARNETT, Stratton Park, Berks, several of them by "Horatio," now owned by Mr. TOWNLEY of Townley Park, and a brother of the far-famed cow "Butterfly;" also one bull and three heifers from Mr. LADD's and herd at Ellington, Hunts; and one bull and heifer from the stock of Mr. CARTWRIGHT of Aynhoe.

Poisoned Animals.

MESSRS. EDITORS—Will you please inform me what to give sheep that have been poisoned by eating something. A SUBSCRIBER.

Dr. Dadd gives the following remedy for diseases of the stomach from eating poisonous plants:—

Take the animal from pasture, put it on a boiled diet of shorts, meal, linseed, and carrots. The following alternative may be mixed in the food:

Powdered marsh mallows,	1 ounce,
Sassafras bark,	2 do.,
Charcoal,	2 do.,
Liquorice,	2 do.,

giving a table-spoonful every night.

Scabs on the Eyes of Cattle.

MESSRS. EDITORS—In answer to an inquiry of James Stevenson, Esq., of St. Davids, N. B., I would say that four years ago I bought a steer from a drove, that had a spot near his eye, precisely like that Mr. Stevenson describes. I put him in the yard with my oxen and steers. In a short time the whole herd were attacked with the disease—also some calves that were kept in a yard adjoining that of the oxen and steers.

In regard to the cure, I think the simplest remedy is the best, if it answers the purpose. I took soft salt grease, and rubbed each animal with it a few times. The scurf peeled off in a short time, and the skin became smooth—the hair soon came out, and left no mark of the disease upon them. W. D. S. Chatham 4 Corners, Col. co., N. Y.

Cheap Drains.

MESSRS. EDITORS—In reading your paper and other works on agriculture, I often find articles on blind draining. My brother and I having made an experiment on our farm in the town of Wales, Erie Co., N. Y., I am willing to give your readers a description of our drain, and the result after a lapse of more than twelve years test, it being laid down in the years of 1839 and 1840.

Our land was a retentive subsoil, and on such soil only would I recommend this kind of drain. We dug our ditch of sufficient width at the bottom, to admit a common round shovel, and from 20 to 30 inches deep, with moderately sloping sides. Then commencing at the upper end, we laid a common hemlock, basswood or other slab, from 10 to 20 inches in width, with the sawed side downward, and the upper edge reclining against the side of the ditch so as to form a triangular throat between the slab and the side and bottom of the drain. We covered the irregular portions of the slabs with other pieces and chinked with turf. We placed the slabs end to end, the same as tile are laid, and were careful to keep the throat clear as we advanced. We formed openings from the surface wherever desirable, with open drains or dead-furrows leading to them, all of which continued to work well at the time I visited the farm in 1852.

In addition I would say that we constructed a pent-stock at the barn-yard, taking the water a short distance in pipes from one of the drains. We made a sink at the lower end of the drain, and sunk it about two feet below the bottom of the drain, to hold the loose dirt that might wash through. This was cleared whenever necessary, that it might not choke the pipe. This too has more than answered our expectations, and supplied the stock with water except in very dry seasons.

I think this is the cheapest mode of draining that I have seen, and that it will be as lasting as any other blind drain. In sections of country where lumber and slabs are plenty, farmers would do well to under-drain every wet portion of their plow-land, as the expense of slabs could not exceed five cents per rod, and the first crop would nearly or quite pay the whole expense. J. WILBUR. Bemis Heights, N. Y.

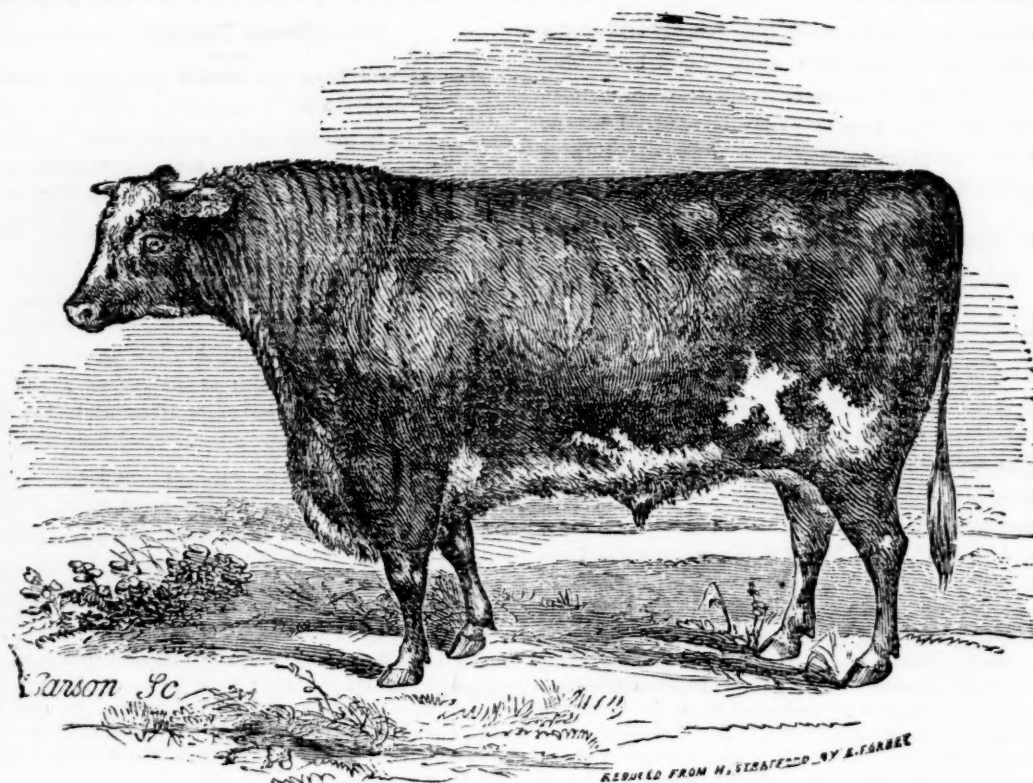
Butter Dairy—Information Wanted.

MESSRS. EDITORS—I intend next season to commence a Butter Dairy of about fifty cows, but previously I shall be obliged to erect stables, spring and ice houses. Will you, or some of your subscribers, oblige me by informing me as to the best plan to build a stable, how large stalls; and, the barn being in a bank, if it would be better to make a manure cellar under the whole of it, with a drain in each stall. How a root cellar had best be made and how large. How a spring house should be constructed, having a good spring, and which is the best form of an ice house.

I think of coming up to your State to procure my stock of cows. In which one of the Southeast Counties would I be likely to procure the best, and at what prices, and at what season. I have fed fifty-nine head of steers this winter, so presume that I could keep fifty cows.

By answering the above questions (through the Cultivator,) as to how such buildings could be the cheapest and best built, and at what cost, you would much oblige. CHESTER Co. PA.

Information is much needed on all the points named above, and we shall be greatly obliged to any of our friends who will furnish answers to any of our correspondent's inquiries.



Short-horned Bull Duke of Glo'ster.

The "Duke of Glo'ster," of which we are gratified in being able to present our readers the above beautiful portrait, was bred by the late Earl Ducie, and purchased at the great sale of his herd last year, by Col. L. G. MORRIS, of Fordham, N. J. BECAR, of New-York, and J. S. TANQUERAY, Hendon, England, for 650 guineas—about \$3,250. By an arrangement among the proprietors, this bull is still in England, but will be brought to this country the ensuing autumn. The above engraving is from a drawing by H. Strafford, taken when Glo'ster was but twenty months old, in the last vol. of the Herd Book, from which we copy his pedigree.

DUKE OF GLO'STER, (1132) Red, calved September 14, 1850. bred by Earl Ducie, Tortworth Court, England; got by Grand Duke (1024), dam (Duchess 59th) by Second Duke of Oxford (9046), g. d. (Duchess 56th) by Second Duke of Northumberland (3646), gr. g. d. (Duchess 51st) by Cleve and Lad (3467). — (Duchess 41st) by Belvedere

(1706). — (Duchess 32nd) by Second Hubback (1423), — (Duchess 19th) by Second Hubback (1423). — (Duchess 12th) by The Earl (646). — (Duchess 4th) by Ketton 2nd (710). — (Duchess 1st) by Comet (155). — by Favourite (252). — by Daisy Bull (186). — by Favourite (252), — by Hubback (319). — by J. Brown's Red Bull (97).

Cures for Various Diseases.

CURE FOR MANGE.—Take lard and sulphur—mix together, and put in lamp oil sufficient to make it pliable, more or less according to the warmth of the day. Rub the part affected with a cob, till you take off the scurf, then rub on the above with the hands. In two days go over them again, and as often after as you see signs of the disease.

CURE FOR SCRATCHES.—Rub the part affected thoroughly with a cob—then take of the above mixture, and rub on thoroughly with a cob. Apply once a day until cured. If you drive in the mud, wash with soap suds before applying the above. Feed occasionally one table spoonful of sulphur

CURE FOR LICE.—Apply the above mixture at such points as the lice are most inclined to congregate; feed sulphur if convenient. You may be sure if you doctor for the mange you will kill the lice.

CURE FOR WARTS.—If not so large as to endanger too much bleeding, pull them off, and apply the above mixture.

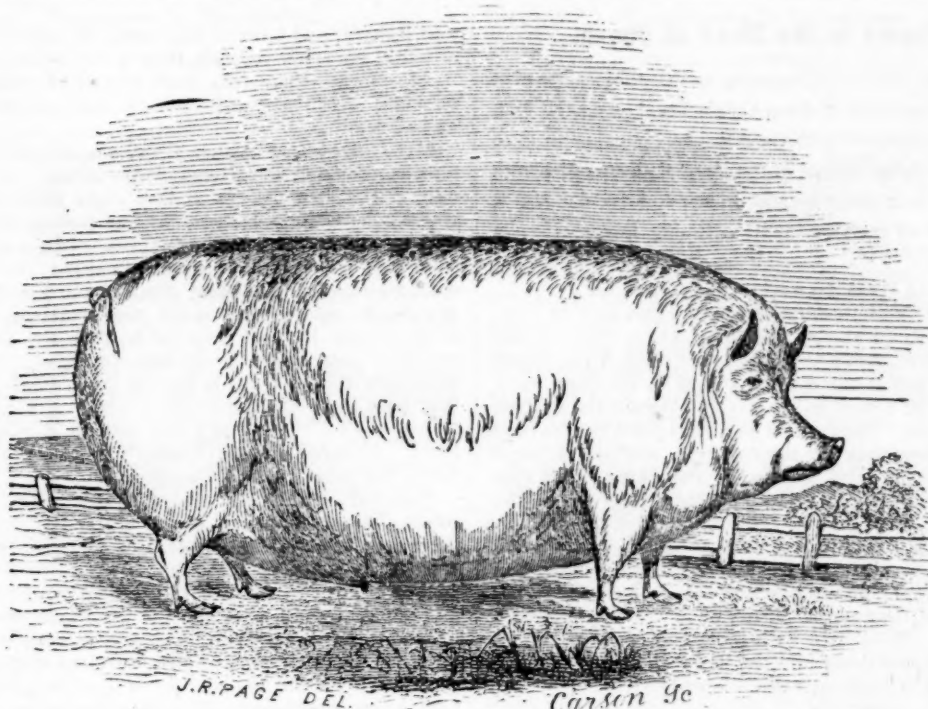
I had a steer that I had keeping out, which has a bunch of warts on his belly, as large as a two quart measure. I am now doctoring him, and if successful I will report. I thought at first I should lose him. Yours very truly, C. C. PERKINS. *Becket, Ms.*

Live and Dead Weight of Cattle.

EDITORS COUNTRY GENT.—I fattened four beeves the past winter, and sold them to W. Webb, who keeps the market in this village, who had them butchered. I send you a statement of their weight, not because I think them extra, but to show that by weighing them alive and deducting one-third will very nearly give the weight of the quarters, tallow and hide, when dressed:

1 Cow, 11 years old past.	1,360—off one-third,.....	907
Quarters 715, tallow 100, hide 90.....		905
1 Steer, 3 years old past, 1,443—off one-third,.....		962
Quarters 792, tallow 86, hide 101.....		979
1 Steer, 2 years old past, 1,225—off one-third,.....		817
Quarters 661, tallow 79, hide 84.....		824
1 Steer, 2 years old past, 1,410—off one-third,.....		940
Quarters 762, tallow 109, hide 89.....		960

Respectfully yours, P. WHITTESEY.
Skaneateles, March 25, 1854.



Suffolk Pigs.

MESSRS. EDITORS—As an answer to numerous inquiries, in relation to Suffolk swine, as to their shape, tendency to fatten, weight, &c., I send you a cut of a six month's pig, which I fattened last fall; also, the following account, kept with two litters of pigs, from the same sow, by Mr. DAVID CROSSMAN of this place:—

Pigs—Dr to middlings.....	\$19 35
do corn at 62½ cents per bushel.....	55 65
do apples at 12½ cts. do	3 60
do barley at 62½ cts. do	12 60
do pumpkins.....	3 00
Total.....	\$93 00
Cr. by one pig sold at three months old,	\$6 50
do pork of ten pigs slaughtered at 8 months, 2,240 lbs. sold for \$7 per hundred.....	156 80
do ten pigs sold at one month old.....	20 60
Total.....	\$183 30
Balance for care.....	\$90 30

All the above pigs were the get of the celebrated boar "Prince." JOHN R. PAGE. *Sennett, Cayuga county, N. Y.*

Importation of Sheep, Pigs, &c.

Mr. S. W. JEWETT, of Middlebury, (Vt.) has recently returned from Europe, where he made large purchases of sheep, pigs, poultry, &c., a portion only of which have as yet arrived in this country. In answer to our request, Mr. J. has furnished us the following account of this importation:—

MIDDLEBURY, (Vt.) April 20, 1854.

FRIEND TUCKER—This trip, I made some of the best selections of stock, from the best and most reliable sources in Europe.

In *Sheep*, I only made a selection of 70 bucks and ewes, and these are from the well known Merino flocks of M. M. GILBERT and CUGNOT, of France.

They are very large, compact, fine in form, oily in the fleece, and of fine wool. This makes 700 of French Merinos which I have selected and imported during three years, at a cost of from \$66 to \$400 each animal, besides the insurance.

In *Pigs*, I was fortunate in making a selection of five from the prize stock of His Royal Highness PRINCE ALBERT, called the "Windsor Breed," (Suffolk,) which are white, and of larger size, and better coated with glossy hair than the Suffolks which are in vogue here at present. Mr. Wall, of St. Gernyn Street, London, butcher to his Royal Highness, dressed the prize pigs immediately after the great exhibition of Smithfield. One of them measured 12½ inches thick on the back, 9 inches of which was solid fat. Also purchased from the prize stock of EDWARD GLOVER, Esq., near Birmingham. These are also Suffolks, very similar to the first named. Also the "improved Essex," or Lord Western breed, of black pigs. This breed took the 2d prize at the great "Metropolitan show" in December last. Many of this breed of pigs on exhibition, were blinded by a "veil" of fat cast over their eyes, an inch or more in thickness, and blocks of wood, about four inches in diameter, were constantly kept under their snouts to prevent suffocation. One shepherd remarked that he should be glad to see them off his hands, for he had watched with them by day and night for weeks.

In *Poultry*, I made selections from the most successful fanciers in England, France and Spain, 46 birds in all, 10 of which I purchased at Windsor, from the aviary of Her Majesty the Queen, consisting of Dorkings, Andalusians, Grey Cochins, and Silver Spangled Hamburgs. One variety from France are the "Normandy breed," which are noted for their fine flesh, as also great layers. They are quite similar to the speckled Dorkings. Some of my selections are from the stock of prize birds, that sold as high as 100 guineas (\$500) each.

I also imported the best varieties of the *Basket Willow* from England and France. The basket willow is now extensively imported into this country for manufacturing purposes, and if not already, it is destined to be one of the most profitable products of this great country. Respectfully yours, SOLO. W. JEWETT.

Worms in the Head of Sheep.

In answer to several inquiries on this subject, we give the following extract from Cole's Treatise on the Diseases of Animals, which gives the best popular practice in relation to the worms in the head of sheep; although it may not be strictly correct in some of its details, it will afford our correspondents valuable information on the subject.

CAUSE.—A large fly, or bee, (*Oestrus ovis*.) lays its eggs in the nostrils of sheep, in August and September, and perhaps earlier and later, where they hatch, and from twenty-five to one hundred small white grubs, with black heads and a black streak on the back, may sometimes be found in the cavity between the nostrils and windpipe. They continue in this place till the next summer, when they get their growth, and are as large as a pipe-stem, and nearly an inch long, with four large teeth, as hard as bone. They then leave the sheep, and soon cast off their skin, when the bee appears, and is ready to lay a new lot of eggs. Some say that the worms do not injure fat sheep, as they find sufficient support in the nostrils; but in poor sheep, for want of food, they ascend in the head. When attacked by the fly, sheep run with their noses to the ground, and often thrust them into the loose earth to shut up the avenues of approach to the enemy.

SYMPTOMS.—They do not generally appear till towards spring, at which time they may be discovered by a sickly countenance and loss of flesh, notwithstanding the best of keeping; sometimes running at the nose, (though not always,) and snorting, as if trying to blow something from the head. In some cases the sheep suddenly spring about in a wild, frantic manner, and drop down dead. When this symptom is exhibited, the grubs have assailed some vital part. When they do not die in this manner, they become so poor that their wool stops growing and falls off, and they give little or no milk. Sometimes they linger, pining away, and do not die till June or July.

PREVENTIVE.—Smear the noses of sheep with tar frequently, from the coming until the departure of the fly. To be sure, begin in July, and continue the use of tar till October. It may be applied directly to the noses of sheep, but the better way is to lay it in a trough or on a board, and strew salt on it, and the sheep, in eating the salt, will smirch their noses pretty well themselves. Give them salt in this way frequently, or keep a supply by them. Tar is also a specific against other diseases.

REMEDY.—Take half a pound of good Scotch snuff, pour on it two quarts of boiling water, stir it and let it stand till cold; with a syringe inject about a table spoonful of this liquid and sediment up each nostril. Repeat this three or four times, at proper intervals, from the middle of October to the first of January. The grubs are then small and more easily destroyed than afterwards, and they will not have injured the sheep as they will if this operation be deferred till later. Half an ounce of asafetida, pounded in a little water, and added to the snuff, will make it more effectual. There need be no alarm if the sheep be very drunk, and apparently in the agonies of death, when the operation is performed, as they will soon recover. Dry snuff may be blown up the nose with a quill, and have a good effect, but it is a slow and dirty job.

The reason for repeating the operation is, there are many cavities and folds where the grubs may not be exposed, and by repeating the application often, they may crawl out, and, by a change of situation, become exposed to the snuff. The sediment is thrown up, as it will be likely to remain longer, and prove more effectual than the liquid.

ANOTHER.—Blow tobacco-smoke well up the nostrils, by inserting the stem of a tobacco-pipe, well charged

and lighted, and blow at the bowl, through a covering of cloth, for a few seconds, then in the other nostril.

ANOTHER.—Pour into each nostril of every sheep affected, a tea-spoonful each of spirits of turpentine and olive oil.

Mr. J. Brown, of Akron, Ohio, a distinguished flock-master, of much experience, says, in the "Ohio Cultivator," that the fly, which is of light drab color, deposits a *crawling maggot* at the nose of the sheep. He had taken hundreds of them, alive and active, from flies. His son had them deposited twice at his nose, while at work among the sheep. The flies work in summer, and in the fall till cool weather. The act of depositing is done very quick, and the maggot is ready to pass immediately into the head. The only chance to destroy them is during their infancy, before they pass high into the head, which is not under five or six weeks. There are two sets in a year, if not more. Matured ones have been found in the heads of lambs not more than four months old.

REMEDY.—He uses tobacco-water with excellent success, commencing the last of July, and applying it till the last of October, generally three times in the season. Boil one pound of good tobacco in a gallon of water. Turn the sheep on their backs in a little trench dug in the ground, and with the head held back on the ground, inject with some force about a table-spoonful of the liquor into each nostril, pointing the syringe so that it will go into the cavities in the head, instead of falling into the throat. If at first the animals appear sick and cannot stand, they will soon get over it. Two persons will go through with several hundred in a day.

Dr. Dadd, in quoting from Gunther, describes the symptoms as, running or turning round by the sheep in eccentric circles, sometimes stopping, and then stepping forward again. The older the disease, the more the animal turns. According as the worms occupy the right or left, the sheep turns to the right or left—if on both sides, the turning takes place to the one or other alternately. When the worm is on the median line, the animal does not turn. Dr. Dadd gives the following remedy:—

Take powdered worm seed.....	1 ounce,
sulphur.....	½ do
charcoal.....	2 do
flax-seed.....	1 pound.

Mix them, and divide into eight parts, and feed one every morning. Make a drink from the white Indian hemp, (*Asclepias incarnata*), one ounce of which may be infused into a quart of water, one-fourth to be given every night.

Ringworm, Scab or Itch in Cattle.

EDS. OF COUNTRY GENTLEMAN.—I have wintered a yard of 50 calves, (now one year old,) and about six weeks ago they began to have the eruption about the eyes, referred to several times in the *Country Gentleman*. I made use of the application recommended in your paper—an ointment of sulphur and mercurial ointment, (*i. e. anguimum*), with decided benefit. The scab peeled off, and the hair commenced growing again; and I doubt not I should have perfected a cure had I followed up the application as I ought. I think by making use of one or two more applications, I can entirely subdue it. It seems highly contagious with young cattle; but my cows that have been exposed have not taken it. Some of my neighboring farmers have it on their cattle. I consider it nothing more nor less than a species of itch. It does not seem to affect the general health of the animal, and I presume is easily remedied, and not alarming or fatal in its results. WM. J. PETTEE. *Lakerville, Conn., March 25.*

Answers to Inquiries.

NEW APPLES.—(A. NORTON, *Sandy Hill, N. Y.*) The Byron Whiting is a new variety which originated at Port-Byron, Cayuga Co., N. Y. It is reported to be a great and constant bearer, and a uniformly fair fruit—qualities of great and increasing importance, since, of late years, our fruit generally has become so much injured by the scab or mildew. From specimens we have examined, however, we are inclined to think it not high enough in flavor to entitle it to general cultivation.

The Melon, or Norton's Melon, is a most excellent fruit in quality, but a slow grower, and moderate bearer.

DECAY OF STUMPS.—S. H. W. We cannot perceive why the height of cutting should make any difference in the period of decay, although high stumps do not usually stand so long, in consequence of the greater ease in tearing them out. Cut low, and kept covered with a heap of turf or earth, stumps will soon decay.

WHEAT DRILLS.—R. H. A. The grain drill manufactured by PIERPONT SEYMOUR, of East Bloomfield, Ontario county, N. Y. is the most general favorite in this state. BICKFORD & HUFFMAN, of Macedon, Wayne county, N. Y. manufacture a good and substantial drill, scarcely inferior in excellence. Our correspondent may learn further particulars by addressing them.

WIND POWER.—J. W. G. We shall give the desired information within a few weeks, or as soon as we can procure the necessary cuts.

HOP CULTURE.—H. C., *Sheldon, Vt.*—This subject was fully treated of in our journals for last year. You will find in *The Cultivator* for 1853, just the information you want, from one of the best hop-growers in the country.

CORN PLANTERS.—E. Ellis. The best planters with which we are acquainted are *Emery's* and *Woodward's*. There may be others as good. *Emery's*, when used with horse power, will plant seven or eight acres a day, more evenly than by hand. The cost is about \$15. We believe it is kept for sale at several of the agricultural stores. *Woodward's* is regarded by many as the best. It is a New Hampshire machine, and we do not know its price, and place of sale—will some of our correspondents inform us?

DYNAMOMETERS.—Will you please inform me whether or not there is an instrument or fixture for testing the draught of plows? If so, where can it be obtained, and what is the cost of it? G. T. F.

The *dynamometer*, or force-measurer, is like a large stiff spring-balance, measuring several hundred pounds, one end of which is attached to the plow, and the other to the team that draws it. The index shows with accuracy the force applied. There are several modifications. Such an instrument would be of great use to farmers in selecting plows and other implements of draught, but we do not know where it can be obtained, nor the cost.

WHAT CROP SHOULD FOLLOW BUCKWHEAT.—I had made preparations to plant corn, on a field that has been sowed to buckwheat for some years past, but have become somewhat fearful of so doing, owing to the remarks of a number of your correspondents touching that matter, and if corn does not succeed after buckwheat of course I don't wish to plant it. Will carrots, potatoes, or white beans succeed any better? or should the field be seeded to grass at the next sowing of buckwheat.

CARROTS.—Could you inform your readers as to the best method of raising carrots, and their relative value for stock as compared with grain. Are they worth as much as oats for feeding horses?

FARMERS' CLUBS.—Do towns in your state generally sustain Agricultural Clubs? We have one with us,

that I think of much value to its members. The members have been experimenting the past winter on feeding farm stock, the results of which, should they prove valuable and you desire it, we would communicate to you. One, as regards feeding a work horse, may be valuable. One of our committee requested to experiment, reports, that he feeds his horse twice a day a basket of cut hay, (the best,) weighing 4 lbs., and 5 lbs. of cob meal each time, making 8 lbs. of hay and 10 lbs. of the meal per day—the expense to him being \$1.54 per week. His horse works all the time, and is fat. Yours, F. A. WILLARD. *Harvard, Mass.*

We greatly need accurate *experiments* on the rotation of crops. There are various conflicting opinions on the points inquired of by our correspondent, owing to the common way of forming opinions from single facts and from guess-work. If any of our correspondents can furnish reliable information, it would be gladly received.

A few towns only in our State maintain town agricultural societies or clubs. Where they do, they have had an excellent influence. Conversational meetings on practical subjects, among intelligent farmers, are eminently useful as well as interesting. We hope our correspondent will furnish us the results of the experiments he alludes to.

Carrots do not contain the substantial nutriment found in oats, but are most excellent as a feeding in connexion with grain, during that portion of the year when dried fodder only can be obtained. The requisites for their successful culture are simply these: Good fresh seed, a deep, fertile, *clean* soil; very early planting, to insure even vegetation; and clean cultivation from the moment the second leaf appears. A drill for sowing is indispensable to field culture.

SKUNK CABBAGE.—Will you have the kindness to inform me the best method of destroying the Skunk Cabbage or Skunk Weed? Some of our meadows have this weed in them, and if it can be killed by cutting, in what month should it be cut, and what time in the month, and of what depth below the surface should it be cut? By answering the above questions, you will confer a favor upon a NEW SUBSCRIBER. *Hartford, Conn.*

Cut with a long bladed or grub-hoe, well below the part supporting the leaves, when the plant has nearly obtained maturity. This remedy applies only to wet meadows not cultivated; when drained and subjected to tillage, this weed will of course soon be eradicated. If any of our correspondents know a better way, they will confer a favor by giving the information to our readers.

ESTIMATING HAY IN BULK.—A correspondent in your last issue inquires the number of cubic feet of hay for a ton. If the hay be closely pressed, as at the bottom part of a bay, 450—if lightly, as on a scaffold or top part of bay, 500 ft. WM. J. PETTEE. *Lakeville, Ct.*

BULLOCK'S SEED PLANTER.—I saw in a last year's number of the *Cultivator*, an advertisement of "Bullock's Patent Seed Planter," and you would confer a favor on me by giving your opinion as to the efficacy of the machine. L. A. J. *Litchfield Co., April 20.*

A correspondent in Ontario county, R. J. BAGGERLY, Esq., writes us that he ordered one of these Planters last year—that "it was thoroughly tried with corn, by several intelligent and practical farmers, and they all pronounced it a total failure."

BLACK CAYUGA DUCKS.—E. B., *Amenia.*—These ducks are said to have descended from the wild black duck, and to have been bred distinct from any other variety for twenty years or more. We believe they can be procured of Mr. J. S. CLARK, *Throopsville, Cayuga co., N. Y.*

A box 7 inches by 8 inches square, and 4-8 inches deep, will contain a half gallon.

Notes for the Month.

CLOVER FOR MANURE.—Mr. D. D. T. MOORE of Watervleit in this county, informs us that he sows clover seed with his barley crop, for fertilizing h's land. Last year he turned under a clover sod—the seed sown the previous spring with barley, but not fed off after the barley was harvested—on the 8th of June, for a late crop of corn. To ascertain the weight of the crop of clover thus turned under, he cut a square foot of the sod, shook off the soil, and found the weight of the clover and its roots to be 2½ lbs. This would give 49 tons, weighing probably about eight tons if thoroughly dried, per acre, to turn under, at an expense of only \$1.50 for clover seed.

SALE OF AYRSHIRE CATTLE IN NEW BRUNSWICK.—We invite attention to Mr. GRAY's sale of Ayrshire cattle, to be held on the 21st July next. A correspondent at St. John, whose judgment may be relied on, writes us—"You may safely recommend the sale to the attention of amateurs and breeders, as I know personally that the animals are choice specimens of the breed, and have proved themselves well suited to the climate."

FRENCH MERINOES FOR OHIO.—Mr. A. R. SHERMAN, of Washington, Ohio, who went to Europe as a delegate from the Fayette County Stock Company, has, since his return, purchased 34 French Merino sheep (three rams and thirty-one ewes) of Mr. JEWETT of Middlebury, Vt. They have just been sent on to Ohio. We did not see them, but are told that they were a splendid lot of sheep.

MAPLE MOLASSES.—Our thanks are due to L. T. SPARHAWK, West Randolph, Vt., for a can of very superior Maple Molasses, which has renewed the demand for "hot cakes," which have disappeared with unusual rapidity.

THE CONNECTICUT VALLEY FARMER.—This is a fifty cent monthly which has been published the year past at Springfield, Mass., by S. BOWLES & Co. Circumstances requiring the withdrawal of its editor, Hon. W. B. CALHOUN, the publishers have been fortunate in securing the services of the Rev. J. A. NASH of Amherst, as its future editor, and under whose direction the first no. of the 2d vol. has just been issued, in a style alike creditable to editor and publishers. Those who have read Mr. NASH's Letters, published in the *Country Gentleman*, will need no assurance of his ability to conduct the *Valley Farmer* with discrimination and judgment. The number before us affords abundant evidence that it will prove a safe guide to the farmer. We wish it the success we are sure it will richly deserve.

THE LAWTON BLACKBERRY.—We tender our thanks to WM. LAWTON, Esq., New Rochelle, Westchester Co., N. Y., for plants of his new Blackberry, a figure and description of which was given on 59th page of current volume of the *Country Gentleman*.

VALUE OF AG. PAPERS.—A subscriber in Connecticut says—"I am much indebted to *The Cultivator*, for remedies which have saved me two cows, thereby saving enough to pay for it a life-time, beside the great amount of knowledge obtained from it on all other subjects."

CANADA THISTLES.—A correspondent in Canada says: We have found out the way to kill Canada thistles. Keep them down and give them no rest under around. Double summer fallowing has rid me of them.

SAMPLES OF WOOL.—We have received from J. S. GOE, of Tippecano, Fayette co. Pa., several samples of wool from imported and home-bred Merinoes, both Spanish and French. Mr. G. informs us that he has

been many years employed in breeding Durham cattle and Spanish and French Merino sheep, and the beautiful specimens of wool sent us, afford good evidence of his success in wool-growing.

TRANSACTIONS OF THE RHODE-ISLAND SOCIETY FOR THE ENCOURAGEMENT OF DOMESTIC INDUSTRY.—We have received the report of the Transactions of this Society for 1853, published in a neat form, and showing that it is in a most prosperous condition. The receipts of the society for the last year amounted to \$6,427.50, and it is now possessed of property to the amount of \$19,798.50—a very pretty sum for an institution of such a character. At the annual fair premiums are offered for all the domestic animals, for mechanical inventions and machinery of all kinds, for cotton and woolen goods, household manufactures in all their variety, the manufactured articles of every trade and handicraft, specimens of the fine arts, horticultural products, and a regatta closes the list. We notice that reports of the several committees are written with unusual care, and, as a whole, the Transactions are proof that Rhode Island, though a small state, is encouraging industry in no small way. The officers for 1854, are as follows:—

President—JOSIAH CHAPIN, Providence.

Vice-Presidents—John Brown Francis, Christopher Rhodes, Warwick, and Elisha R. Potter, South Kingston.

Cor. Secretary—Elisha Dyer, Jr., Providence.

Rec. Secretary—Stephen H. Smith, Smithfield.

EMPIRICISM IN AGRICULTURE.—Extract of a letter from a subscriber in Pennsylvania—"Agricultural empiricism is fast running agricultural improvement into the ground; and unless it be boldly combatted and put to the blush, the intelligent and independent agriculturist will withdraw from all participations in shows, societies and periodicals, when he finds to what vile uses they are put. I trust the *Country Gentleman* will ever be found opposed to humbuggery—the higher the ground it takes in that respect, the more reliable will it be considered."

SUPERPHOSPHATE OF LIME.—Extract of a letter from a subscriber at New Britain, Conn.—"I sowed peas, beets, radishes, &c., for market, before the snow storm—the first, partly with guano and partly with superphosphate, in the drill. They are all up and look well, but those sowed with phosphate came up earlier, and look decidedly the best. It is the conclusion with me, after two years' trial, that phosphate of lime will cause seeds to vegetate earlier than any thing else with which I am acquainted, and that root crops at least, are greatly benefited by its use, in the kind of soil about me—red loam."

TURNEPS INJURIOUS TO SUCCEEDING CROPS.—W. R. FAIRBAIRN of Stevenson county, Illinois, writes us that he has been very successful in growing turneps on wheat stubble turned under after harvest; and that he has planted the land the following season to peas, beans, potatoes, corn, oats, melons and onions; but not one of these produced any thing near an average crop. The corn produced one-third less in measure than that grown on the same field where no turneps had grown. The onions after turneps, were worthless, but on land where no turneps had grown, sown the same day and from the same bag of seed, were as large as saucers. He tried this two years, and lost more than all his turneps were worth, by the deterioration of the succeeding crops.


SEEDLING PLUM.—We are indebted to WILSON DENNIS, Cedar Grove, Pa., for scions of a seedling Plum, which he thinks will prove highly valuable on account of its hardness and productiveness.

SOWING TIMOTHY SEED.—A correspondent says—"When is the best time to sow Timothy, is a question worthy the consideration of your correspondents."

ENTOMOLOGY.—The Legislature of this State at its late session, placed \$1,000 in the hands of the New York State Ag. Society, to be expended in making an examination and description of the insects of this State, injurious to vegetation. At the last meeting of the Board, Dr. ASA FITCH of Salem, Washington Co., was appointed to carry this object into effect. A better selection could not have been made, and we learn that he is to devote his attention this season, mainly to the investigation of such insects as depredate upon fruit-bearing trees. His report will be looked for with interest, and we doubt not will prove of great economic and scientific value.

MORGAN HORSES.—The attention of breeders is invited to the advertisement of Morgan Horses in this paper. It will be seen that the services of one of this noted breed, are offered to the farmers of Saratoga the present season. "Young President" belongs to the Sherman Morgan branch, and was sired by the noted Steele Morgan, now living and active, at the age of over 30 years. This is one of the most popular branches of the family, and we doubt not "Young President" will attract the attention and secure the patronage of the lovers of fine horses in this vicinity.

THE COUNTRY GENTLEMAN.—Extract of a letter from a subscriber in New Hampshire: "I have taken more or less agricultural papers for nearly twenty years; and in all that time I have not found a paper that suits me so well as the COUNTRY GENTLEMAN. Even the Horticulturist, when edited by Mr. Downing, was not received and perused with more pleasure."

 The next meeting of the *American Pomological Society*, is to be held at the Hall of the Massachusetts Hort. Society in Boston commencing on Wednesday the 13th of Sept. next.

TOBACCO CULTURE.—E. H. BABCOCK & Co., book-sellers, Syracuse, have just published a brief treatise on the Culture of Tobacco, adapted chiefly to the northern states, with the most approved method of managing the crop to fit it for market. Its plain directions for every process must be invaluable to the new beginner.

SALE OF SHORT HORNS IN ENGLAND.—The herd of short horned cattle belonging to Mr. Wilkinson, of Linton, took place under the auspices of Mr. Strafford, on the 13th of April, and attracted a company which has only been excelled by that in attendance at the sale of Mr. Bates' celebrated herd. Among those present were Dr. WATTS and Mr. WADDLE of Ohio, who purchased eight cows and heifers.

GREAT POTATO CROPS.—The California papers state that JOHN M. HORNER, Esq., of San Jose Valley, harvested last season, the enormous amount of *four hundred thousand bushels* of potatoes: and that his neighbor, Mr. E. L. BEARD, also raised two hundred and fifty thousand bushels potatoes, beside other immense crops.

Answers to Inquiries.

DEFECTIVE ICE HOUSE.—A Subscriber, New York. The communication you sent us in November last, was received and published in the Country Gentleman, and we supposed also in the Cultivator, but find it was omitted in the latter. We are inclined to think that the difficulty with your ice house is caused by the drain. In a communication from Dr. HOUGHTON of Philadelphia, published in our papers last year, he says:—"My ice kept well till the first of June, when I observed it was beginning to melt. I looked about for the cause, and observed that the workmen had dug a drain at one side of the box, from the interior, and had left it open to the air, supposing that some such drainage

would be necessary. This I at once perceived, must serve as a sort of flue to carry air from the bottom of the house to the top, or the reverse, whichever way the current might happen to set, making a constant draught through the body of the house. The straw upon the top of the ice, and particularly at the sides, was, at this time, quite moist and rotting. I immediately closed the drain with sods and earth, as tightly as possible. In a few days afterwards, I found the interior of the Ice House dry and cool, and the ice free from moisture and keeping admirably."

Our correspondent is referred to the Co. Gent. p. 70, vol. II., or to the Cultivator for 1853, p. 275, for Dr. H.'s article at length. We think a ventilator should be attached, to let the warm air which accumulates under the roof, pass off.

WORMS.—Will you inform me how to destroy a small worm which I find in rich soil. It is about three-fourths of an inch long, of a dark color, and found in nests. Are they an insect that will destroy plants? What shall I do to kill them?

Please give what information you can through the columns of the *Country Gentleman*, and oblige A SUBSCRIBER. *Sheboygan Falls, Wis.*

We have occasionally met with a "worm," probably the same as described above, but do not know of any serious injury committed by it. It is most frequently found on ground rather wet, and long in cultivation. Ashes and lime would probably prove best.

Can the refuse of a blacksmith's forge be used to advantage about young trees or vines? If it can, about what sorts and how applied? B. H.

The iron, ashes, &c., may be useful as special manures, and if pulverized, cinders would probably be principally valuable in heavy soils as a *loosener*. On light soils, they would not be likely to be of much benefit.

Information Wanted.

MOWER AND REAPER COMBINED.—J. J. C. wants a mower and reaper combined, and wishes us to tell him whose machine is the best, which we are not able to do. We should like to hear from any one whose experience would enable him to name a good combined machine for these purposes.

GARGET IN COWS.—Will some of your numerous readers give the cause, and a remedy of what is commonly termed Garget in cows, and oblige A SUBSCRIBER.

FARM GATES.—R. H. A. Will some of our correspondents, skilled in gate structure, give us a description of the best and cheapest farm gate, for the benefit of our correspondent and others.

WHEAT ON WHEAT STUBBLE.—I wish to know if land composed in good part of clay, with sand and gravel, and dry,—water never standing on the surface enough to injure a crop, and which will by plowing under clover and using plaster, produce thirty bushels per acre of wheat, can be kept in sufficient order to get a crop of wheat every season, by using Guano, Lime, and Leached Ashes—i. e. by using these manures, could I stubble in a field to advantage for three or four seasons?

If I could, what would be the way of applying the manures? how much of each to the acre? J. A. C. *Oakfield, N. Y.*

We shall be glad to hear from our correspondents in answer to the above.

OREGON PEA.—Can you or some of your correspondents, tell me, what use is made of the Oregon Pea? I have received some of the seed from a gentleman in Illinois, who said they commanded a high price in their market, but what use is made of them, he did not inform me. I think them too small for culinary purposes. Any information, respecting this pea, will be thankfully received by, W.

Agricultural Societies.

NEW-YORK STATE FAIR—We are gratified to learn that arrangements have been effected, by which the usual Cattle Show of the American Institute for this year, is to be combined with that of the State Ag. Society, which, it will be recollected, is to be held in the city of New-York. This not only does away with all rivalry between these Institutions, but will add materially to the interest of the Fair, and make it, we doubt not, the largest and most important one ever held in the union.

We hear also that the New-York Hort. Society have determined to give up their autumnal exhibition, and to render all their aid to the horticultural exhibition of the State Fair.

The Connecticut State Ag. Socie'y is to hold its first fair the coming Autumn, at New Haven, the citizens of that city having raised a subscription of \$2,500, for its benefit.

VERMONT STATE FAIR.—The next Annual Fair of the Vermont State Agricultural Society is to be held at Brattleboro, on Tuesday, Wednesday and Thursday, the 12th, 13th and 14th days of September next.

Sweet Corn for Fodder.

STOWELL'S EVERGREEN, and the recently introduced **OLD COLONY SWEET**, are the best and by far the most productive varieties to sow broadcast or in drills, to cut for *Green Fodder*; the stalks, (nearly the whole of which are edible,) attaining a much larger growth, more profusely furnished with leaves, and being more nutritious than other sorts. May be sown as late as July with advantage.

Price, 25 cents a Quart, or \$5 per Bushel.

May 25—w3m1t J. M. THORBURN & CO.,
15 John-st., New-York.

Field Turnip and Beet Seeds.

THE following varieties of the very finest qualities and of either American or European growth; the latter being from the most reliable growers, and warranted not to be surpassed in quality by any other importations.

TURNIPS —Purple top Ruta Baga,	50 cents per lb.
Skirving's Improved,	50 "
do do (Am. Seed),	75 "
Dale's Hybrid,	75 "
Yellow Aberdeen,	75 "
Large White Flat,	50 "
Large White Norfolk,	50 "
Improved White Strap Leaf, flat,	75 "
Improved Red Top, flat,	75 "
English Rape, or Cole,	25 " quart.
BEETS —White Silesia, or French Sugar,	50 lb.
Yellow German Sugar,	50 "
Long Red Mangel Wurtzel,	50 "
Yellow Globe,	50 "

with every desirable variety of Flower, Field and Vegetable Seeds, of the most approved qualities.

To Planters or Dealers requiring Beets or Turnips in large quantities a liberal discount will be made from the above prices.

May 25—w3m2t J. M. THORBURN & CO.,
15 John st., New-York.

Thorough-bred Essex Boar, "Lord Weston" for Sale.

IS 22 months old, was got by an imported Fisher Hobbs boar; out of an imported Sow from Lord Weston's stock; and is a superior animal. Price, \$35.

Also, Young Pigs of the best Imported stock—\$25 a pair, at 2 months old. Address C. S. WAINRIGHT,
May 25—w3m1t Rhinebeck, Dutchess Co., N. Y.

Young Black Hawk.

THIS celebrated horse will stand this season at the stable of I. D. REMINGTON in Sennett, three miles north of Auburn, where he can be seen at any time. He was sired by Hill's Black Hawk, Vermont dam by old Manbrino of Dutchess county—gr. dam by Plato—gr. gr. dam by imported Messenger. He is a jet black, a little larger than the old horse, and is the best pattern of the old horse ever got by him. He can show as good stock as any horse in the State, and I will put his colts against any horse's colts in the Morgan family.

Terms, \$20, to insure a foal—\$12 for the season. Pasturing furnished and all necessary care at reasonable prices.

IRWIN D. REMINGTON, Proprietor.

Sennett, Cayuga, Co., April 27th, 1854.—w1m1t*

English Red Durhams.

I HAVE two Short Horned Bulls of this breed for sale:—one 2, and the other 3 years old, of fine form. The Dam was from Col. Jaques' herd, Charlestown, Mass. Bull from Gen. Van Rensselaer's original stock. I have raised this stock for eighteen years. They are generally deep red, and for milking properties I have never seen their equal. Price, One Hundred Dollars each. **JESSE THOMPSON.**

Ballston, N. Y., June 1—lt*

Young President.

THIS celebrated MORGAN HORSE will stand this Season for the use of Mares, at the following places:

Mondays of each week, at Clifton Park Village; Tuesdays, at Burnt Hills; Wednesdays, at Jonesville; Thursdays, Mechanicsville; Fridays, at Mr. Montgomery's Stable, Stillwater; Saturdays, at Ketchum's Corners.

PEDIGREE.—This horse was sired by the *Steele Morgan*, he by the *Old Sherman*, and Sherman by the *Justin Morgan*. Dam of Young President was sired by the *Hawkins Morgan*, and he by the *Justin Morgan*.

This Horse is a beautiful dark Bay Color, weighs 1,050 pounds, and is well proportioned for bottom and speed, and moves in beautiful style; will trot a mile in less than three minutes when in proper condition. He has formerly been kept in Orange, Washington, and Caledonia Counties, Vt., where his Stock is well known, and therefore we offer the names of some of the most distinguished Horsemen in those Counties, concerning his Stock, as the following certificates will show; but in this vicinity we expect that this Horse will stand upon his own merits, and we would respectfully invite all those that are in the way of raising Stock of Improved Blood, to call and examine him for themselves before engaging their Mares elsewhere:

We, the undersigned, Inhabitants of Orange, Washington and Caledonia Counties, Vt., certify that we have been acquainted with C. M. HUCKINS' Horse and his Stock for the last five years, and believe that his Stock has proved better than that of any other Morgan Horse ever owned in this State, both for speed and durability, and that his Colts have been sold for higher prices than those of any other Horse's Colts in this State.

E. H. Craig,	S. H. Merrill,	J. W. D. Parker,
Horace Mills,	Reuben Paige,	Ellis Bliss,
John Peabody,	M. D. Blake,	Jos. W. Bliss,
Robert Gray,	Amos Garland,	Stebbin Andross,
Charles Grow,	Henry Oben,	Jesse Johnson,
John Merrill,	J. O. Jordan,	J. W. Clark,
Stephen Thomas,	B. C. Jones,	

April 25, 1854.

We, the undersigned, fully concur in the above statement, and would also state that we sold a five year old Horse this Spring to Mr. Cook of N. Y. City, for Seven Hundred Dollars, and we still have a Mare, three years old in June next, that can trot a mile in three minutes, at the present time; we think her the best Mare of her age in the State. Both were Sired by Young President. **Thomas Rowland,**
East Corinth, Vt., April 26th, 1854. **Daniel Rowland.**

TERMS:—Ten Dollars for the Season. To insure as parties can agree. All Mares disposed of before the usual time of foaling, will be considered with Foal.

Proprietors: { C. M. HUCKINS, Topsham, Vt.
{ L. A. CHASE, Albany, N. Y.

FARM FOR SALE.

THE subscriber offers his Farm for sale, containing, according to deed, 131½ acres, situated in Oswego, about one and-a-half miles east of the Harbor, on the shore of Lake Ontario. It is well calculated either for Grain or Dairying, or selling of Milk, which brings from two to three cents per quart at the house, and three to five if peddled out, or for Garden Vegetables. There is a comfortable House, two Barns, with stable room for two span of horses and 20 cows, hog house, &c., and an Orchard of about 150 fruit trees. There is also a Sand-bed on the farm, for which there is a constant and increasing demand in the City, at 25 cents per load at the bed, and from 75 cts. to \$1 if delivered in the City. A good team could deliver from four to five loads per day—five or six teams could find constant employment drawing sand. There is judged to be about Forty acres of Wood and Swamp, mostly black ash. Price, \$8,000—terms, \$3,000 down, and the remainder in payments of \$500, with the interest on all sums unpaid, yearly. There is no doubt but the farm would fetch a good deal more if divided into small lots. I have been offered from \$100 to \$150 for the front of the farm. The Troy and Oswego Railroad will probably run within eighty or one hundred rods of the front door. For further particulars inquire of Mr. SLOCUM, City Surveyor, or of the owner on the premises.

HAMILTON COVENTRY.

Oswego, N. Y., May 11—w1m1t*

The People's Patent Office.

THIS well known establishment is still carried on under the personal superintendence of the undersigned, by whom all the necessary drawings, specifications, and documents, for Patents, Caveats, Designs, Foreign patents, &c., are prepared with the utmost fidelity and dispatch, on very moderate terms.

Persons wishing for advice relative to Patents or Inventions may at all times consult the undersigned *without charge*, either personally at his office, or by letter. To those living at a distance he would state, that all the needful steps necessary to secure a Patent, can be arranged by letter, just as well as if the party were present, and the expense of a journey be thus saved. When parties wish to be informed as to the probability of being enabled to obtain Patents, it will be necessary for them to forward by mail a rough outline sketch and description of the invention. No fee or charge is made for such examinations.

Private consultations held daily with Inventors from 9 A. M. to 5 P. M. All consultations and business strictly private and confidential.

Models from a distance may be sent by express or otherwise.

For further information apply to or address, post paid,

ALFRED E. BEACH,

Editor and Proprietor of the People's Journal.

Solicitor of American and Foreign Patents.

People's Patent Office, 86 Nassau-Street, New-York.

THE PEOPLE'S JOURNAL, a record of Science, Mechanics, Invention, and Agriculture Published Monthly. Every number contains 32 pages, beautifully printed on fine paper, and *profusely illustrated with splendid engravings*, forming at the end of every year two fine volumes, comprising nearly 400 pages, with about six hundred elegant engravings. Terms only **ONE DOLLAR A YEAR**, sent by mail. Specimen Copies 12½ cents. Address as above.
my11—w&m3m

Manures.

PERUVIAN GUANO, Improved Superphosphate of Lime, Bone Dust, Bone Black, Sulphuric Acid, Potash, Poudrette, Plaster of Paris, Charcoal, &c., &c., for sale by

GEO. H. BARR & Co.,
53 Cortlandt-street, New-York.

March 1—mtf

Bone Dust.

BONE SAWINGS, OR MEAL, a very superior article, warranted pure. Price, \$2.75 per barrel. Bone Dust, ground quite fine, \$2.37 per barrel.

We are prepared to supply all orders for this very superior manure. Samples will be sent if requested.

LONGETT & GRIFFING,

Ap. 20—m3tw2m No. 25 Cliff-st., near Fulton, New-York

Fertilizers.

BEST Peruvian Guano—

Super-Phosphate of Lime, "DeBurg's No. 1"—

Poudrette, of the best quality—

Ground Plaster, suitable for agricultural purposes—

Ground Bone, Bone Dust, and Burnt Bone.

Also, Grass Seeds of reliable quality, at the lowest market price.

GEO. DAVENPORT, 5 Commercial,
Feb. 9, 1854—w&mtf cor. of Chatham st., Boston.

Peruvian Guano.

WE are receiving our supply of Peruvian Guano per ships Blanchard, Senator and Gray Feather from the Chincha Islands, and now prepared to make contracts for the spring supply. As the demand is large we would advise all who may be in want of this valuable manure to make early application. Price, \$50 per ton of 2,000 pounds. Be particular to observe that every bag is branded,

Warranted No. 1 Peruvian Guano.

Imported into the United States by F. BARREDA, BROTHERS, for the Peruvian Government.

LONGETT & GRIFFING

State Agricultural Warehouse, No. 25 Cliff-street, New-York
Oct. 20th—w&mtf

For Sale or Lease,

5,000 ACRES OF CHOICE FARMING LANDS in Gallatin county, Illinois, in the immediate vicinity of the extensive Mining operations of the Shawnee Coal Company. A cash market for all kinds of farm products at the mines. These lands will be sold or leased to good farmers on accommodating terms.

For particulars, apply to H. H. CASEY, Sec'y,
Corner Hanover Square and Pearl street.
New-York, Feb. 1, 1854—m5t

Albany Agricultural Works,

Warehouse and Seed Store, 369 and 371 Broadway, Albany.

THE subscriber having purchased the stock in trade of the above works, is now prepared to furnish to order a full assortment of Farm Implements and Machines adapted to all sections of the country, both north and south, among which may be found—

"Emery's Patent Changeable Railroad Horse Powers."

Overshot Threshing Machines with Separators.

Mowing and Reaping Machines.

Grist-mills, Corn-shellers and Clover-hullers.

Circular and Cross-cut Saw-mills, adapted to the horse power, for cutting fire wood and fence stuff, with a full and complete assortment of **FIELD AND GARDEN SEEDS** and **FERTILIZERS**. For further particulars, full Catalogue will be sent on application by mail.

RICH'D H. PEASE,

March 30—w&mtf

Successor to Emery & Co.

United States Agricultural Warehouse and Seedstore

No. 197 Water street, near Fulton street, New-York.

MERCHANTS, Planters and Farmers, in want of **AGRICULTURAL** and **HORTICULTURAL IMPLEMENTS** or **SEEDS**, for shipping, plantation, farm or garden purposes, will please call and examine our extensive and superior assortment of goods in the above line, unsurpassed by any other house in the United States, for finish, material and workmanship, and of the most approved patterns; all of which we will sell on as good terms as any other house in this city.

We have among our assortment the far-famed and unequalled **EAGLE D. & F. PLOWS**, warranted to draw lighter and do as good work in sod or stubble ground, as any other Plow to be found in the United States.

We also have the highest premium **Straw Cutters**, **Fan Mills**, **Grain Mills**, **Premium Stalk Cutters**, **Horse Powers**, **Threshers** and **Separators** of different kinds; **Ketchum's** celebrated **Mowing Machine**, unsurpassed; **Hussey's** **Reaping Machine**—also, **McCormick's** **Cotton Gins**, **Cotton Presses**, **Hay and Hide Presses**, **Brick Machines**, **Harrows** of all kinds, **Sugar Mills** for plantation use, **Sugar Mills** for grocer's use, **Hand Store Trucks** of all kinds, **Mule Carts**, **Horse Carts**, **Farm Wagons**, **Wheel Barrows**, **Coal and Canal Barrows**. In fact we have everything for shipping or using on plantation, arm or garden.

JOHN MAYHER & CO.

N. B. Guano, Bone Dust, Poudrette, Superphosphate of Lime, and other fertilisers.

Jan 1, 1853—m&wif

North River Agricultural Warehouse and Seed Store.

No. 53 Cortlandt-Street, New-York,

WHERE may be found a large and complete assortment of the best and latest improved **Agricultural** and **Horticultural Implements**, **Field and Garden Seeds**, **Fruit and Ornamental Trees**, **Fertilizers** of all kinds, &c., &c.

March 1—mtf

GEO. H. BARR & Co.

Mower and Reaper.

Forbush's New Improved Combined Reaper and Mower.

THE above patent machine is now permanently established, and its entire success as a Combined Reaper and Mower proved beyond all doubt. This machine will be warranted to be made in a workmanlike manner and of the best materials, and capable of cutting from ten to fifteen acres of grass or grain per day, and in all respects to do the work as well and as easy for the horses as any other machine in the country.

Price of Combined Reaper and Mower,..... \$135

" Mower,..... 115

For sale by

LONGETT & GRIFFING,

No. 25 Cliff st., New-York.

April 6—w2ta&4tmay—m3t

Hallenbeck's Mowing Machine.

THE subscriber having perfected and tested his new and improved Mowing Machine, now offers it to the public for the coming season, confident that it will not fail to give perfect satisfaction. It is simple in construction, light of draft, and perfectly free from clogging. They are built at present for me by Deering & Dederick, corner of Bleecker and Franklin streets, Albany, N. Y. A large number will be made, and are offered to the public, warranted to operate well and to give satisfaction. Persons intending to buy mowing machines will find it to their advantage to examine mine before purchasing.

For further particulars, address the subscriber at Albany, N. Y.

MARTIN HALLENBECK.

Feb. 2—w&mtf

Live Stock Agency.

IN compliance with repeated solicitation, the subscriber offers his services for the purchase of Horses, Cattle, Sheep, Swine and Poultry. His long acquaintance with different breeds and breeders of these animals, gives him superior facilities for procuring the best.

SANFORD HOWARD.

Office of the Boston Cultivator, Boston, Mass.
March 9—w6m3t

Devon Cows,

HEIFERS, and Bull Calves—pure blood—for sale by
Feb. 1—mly. B. V. FRENCH, Braintree, Mass.

Thomas Gould,

BREEDER OF DEVON CATTLE, Suffolk Swine, Madagascar or Lop-Eared Rabbits, and choice and fancy Poultry, Aurora, Cayuga county, N. Y. Mar. 23—w&mtf

Pigs, Fowls, Rabbits and Pigeons.

SUFFOLK AND MIDDLESEX PIGS, Fancy Fowls, Lop-eared Rabbits, and Fancy Pigeons.—The subscriber has now for sale a choice assortment of the above animals, purely bred from imported stock, and warranted genuine. Address
GEO. P. BURNHAM,

Box 22, Post-Office, Boston, Mass.
Boston, March 9, 1854—w5m3t

Suffolk Pigs,

OF pure blood, for sale by B. V. FRENCH,
Feb. 1—mly Braintree, Mass.

Pure Bred Stock at Private Sale,

At Mount Fordham, Westchester county, New-York. Eleven Miles from City Hall, N. Y., by Harlem Railroad Cars.

HAVING met with more success than I anticipated the past year, with the Catalogue of male animals at Private sale, is the reason for offering this lot of animals. AND MY JUNE SALE BY AUCTION, WILL NOT TAKE PLACE. A full descriptive Catalogue with prices attached, will be published on the fifteenth of April, and I intend to be at home myself to see any who may call. I will sell at private sale, about 18 Short-Horns, 6 of which are young Bulls and Bull Calves. The Cows and Heifers old enough will be in Calf to the Celebrated Imported Bull "BALCO," (9918.) or Imported "ROMEO," winner of the first Prize at Saratoga, in 1853; and also at American Institute the same year.

The young Bulls and Bull Calves, are some of them from imported Cows, and sired in England; the others are sired by the Imported Marquis of Carrabas, (11789.) winner of the first Prize at Saratoga, the past year, as a two year old.

Also, about 10 head of Devons, consisting of a yearling Bull, sired by MAJOR, and 5 Bull Calves, sired by my imported first Prize Bull, FRANK QUARTLY, and several of them from imported Cows. The Cows and Heifers old enough, will be in Calf to FRANK QUARTLY. Also 6 or 8 Suffolk Sows; and several young Suffolk and Essex Bors. Also, 2 Southdown Rams, Imported direct from Jonas Webb; and 6 Yearling Rams, all bred by me, from Stock on both sides, imported from Jonas Webb. Catalogues will be forwarded by Mail if desired.

All Animals delivered on SHIP-BOARD, or RAIL CAR in the City of New-York, free of expense to the purchaser. The Devons are at my Herdsdale Farm, 12 miles north, to which place I will take persons both to and from.

MY FRIEND MR. N. J. BECAR, who is interested in several of my Importations, will also sell about 10 head of Short-Horns, consisting of 4 young Bulls, and 5 or 6 Females. His young Bulls are also several of them from imported Cows, and sired by the LORD OF ERYHOLMNE, (12295,) and the celebrated first Prize Imported Bull ROMEO. Mr. Becar's Cows and Heifers are in Calf to the imported Bull, MARQUIS OF CARRABAS, (11789.) Mr. Becar can be seen at his Store, No. 187 Broadway, New-York, at which place he will make arrangements to go to his Farm, at Smithtown, Long Island. His Animals will be entered in the same Catalogue with mine, which can be obtained by addressing him at his Store, or me at Mount Fordham. His animals will be delivered in the same manner as mine. Our Importations have been in almost all cases made at the same time, and are of equal merit, excepting that I have more in number. Terms, cash on delivery. L. G. MORRIS.

March 30, 1854—w&m2m

Prouty & Mears' Plow.

A LARGE assortment of these celebrated Plows can be found at the North River Agricultural Warehouse and Seed Store, 53 Cortlandt-street, New-York.

March 1—mtf GEO. H. BARR & Co.

Eggs for Sale.

I WILL SPARE A FEW SETTINGS OF EGGS from my choice stock of Buff White and Gray Shanghai fowls—also from my Bolton Gray and Dorkings.

S. V. C. VAN RENSSELAER.

April 27—w2t* Claverack, Col Co., N. Y.

Fowls and Eggs for Sale,

OF Brahma Pootra, Chittagong, White Shanghai, and Buff Shanghai varieties, choice, and of pure blood. Eggs for setting, by the subscriber.

FRANCIS W. COWLES.

Farmington, Ct., March 8, 1854.—Mar. 30—w1m2t

Imported Horse Consternation.

THIS well known, thorough bred horse will stand the present season, as heretofore, at the farm of the subscriber, one mile west of Syracuse. For full pedigree, see Derby and Miller's edition of Youatt. Terms, \$10 the season; \$15 to insure, payable in advance in all cases. Good pasturage furnished at 50 cents per week. Mares at risk of owners in all respects. No mare will be served that is either ring-boned, spavined or blind. J. B. BURNET.

Syracuse, May 1, 1854—w2m—m3t

The Original Black Hawk

WILL be kept the coming season at his old stand, the stable of DAVID HILL, in Bridport, Vermont. His services will be limited to fifty mares. Terms \$50 the season.

Those wishing his services should send their names early, as those sending first will be first served.

DAVID HILL, Agent.

Bridport, Vt., April 1—m2t*

Black Hawk Horse Haven.

THIS horse, one of the most distinguished of the Black Hawk family, will stand at the stables of the subscriber the coming season. Terms, twelve dollars the season—Insurance by agreement. Good pasturage afforded at a reasonable price. Accidents at the risk of the owners, though great care will be used to prevent their occurrence.

The subscriber pays much attention to the breeding of fine animals. He is the owner of the beautiful horse Falcon, the thorough bred mare Latona (purchased of the late Mr. Gibbons), and others. The celebrated horses Vermonter, at Burlington, Iowa, and Champlain at Hartford, Trumbull county, Ohio, were bred by him. He has for sale a very valuable Black Hawk mare, four years old in June next.

ROBBINS BATTELL.

Norfolk, Conn., March 30, 1854. ap6w1m2t

Genuine Superphosphate of Lime.

THE subscriber has now on hand and is constantly manufacturing, at his works in Middletown, Conn., Superphosphate of Lime, which he warrants free from any adulteration, and equal, if not superior, to any in the market. It is made of bones prepared in the most approved manner, put up in substantial bags for transportation, and is furnished promptly to order or at the works.

He also manufactures, and has constantly on hand for the market, Bone Dust of a superior quality.

These fertilizers have been thoroughly tested by careful and experienced agriculturists in this vicinity, and have given general satisfaction.

ANDREW COE.

April 1—m3t

Middletown, Conn.

Ground Bone.

THE subscribers are now prepared to furnish Bone Dust by the barrel or ton in its pure and most efficient state, ground to any desired fineness. GEO. H. BARR & Co.,
March 1—mtf 53 Cortlandt-street, New-York.

Super-Phosphate of Lime.

THIS celebrated fertilizer, where it has been fairly tested the last year, has been found equal, and in many cases superior to the best Peruvian guano, in its immediate effect, and much more permanently beneficial to the land. It is adapted to any soil in which there is a deficiency of phosphate, which is often the case. All crops are benefited by its application. It is composed of ground bones, decomposed by sulphuric acid, to which is added a due proportion of Peruvian guano, sulphate of ammonia, &c.

For sale, with full directions for use, in bags of 150 pounds each. No charge for package. All bags will be branded "C. B. DeBurg, No. 1 Super-Phosphate of Lime."

GEO. DAVENPORT, Ag't for manufacturer,
5 Commercial, cor. of Chatham st., Boston.

Feb. 16, 1854—w&mtf

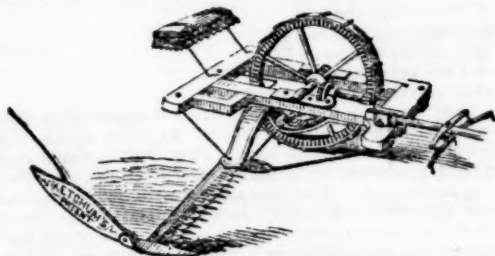
Cider Mill and Press.

HICKOK'S CIDER MILL AND PRESS—This mill and press is conceded, by all who have seen and used it, to be the best—simple in construction, portable, weighing 275 lbs., and not liable to get out of order. Warranted to work well, and give satisfaction. The first premiums of the American Institute and Crystal Palace have been awarded to this machine. Price, \$40. Drawings and descriptions will be sent by addressing the sole agents,

LONGETT & GRIFFING,

25 Cliff-street, New-York.

May 1—m5t—w2mM, Ju, J, A, & 4tms

**Ketchum's Improved Mowing Machine,**

WITH ENTIRE CHANGE OF GEAR,

The only Successful Mower now known.

KETCHUM'S IMPROVED MACHINE, which we are building for the harvest of '54, was thoroughly tested last season, and the advantages gained by our change of Gear are in all respects as we designed, viz: *durability, convenience and ease of action.* The shafts now have bearings at both ends, which overcomes all cramping and cutting away of boxing. A counter balance is attached to the crank shaft, which gives it a steady and uniform motion. Each Machine can be thrown out of gear; there is great convenience in getting at each and every nut, all of them being on *upper side of the frame*; oil cups are attached to all the bearings, which, by the use of a wad of cotton, will hold oil for a long time, as well as protect the bearings from dust, grit, &c.; the finger bar is lined with iron its full width, which protects it from wear.

These and various other additions for strength, durability, &c., makes it the most simple and perfect agricultural implement in use. They weigh about 750 lbs. each, and can easily be carried in a one-horse wagon.

It requires not over ten minutes to get one ready for operation, there being but two bolts, (besides the pole bolts,) to be secured, to have one ready for use. They will cut all kinds of grass, and operate well on uneven or rolling lands, or where there are dead furrows. This Machine took the highest award, with *special approbation*, at the World's Fair; it also received, during last season, one silver and four gold medals, and various other flattering and substantial testimonials of approval. We have spared neither pains nor money to make this Machine deserving of public favor, and hope to be able the coming season to supply the great and increasing demand.

We take this occasion to caution farmers against buying *untried* Mowers, if they do (as was the case with many last year) they incur loss, vexation and disappointment.

If any parts are wanted to repair any Machine we have sold or may hereafter sell, they will be furnished and only manufacturer's cost for the same be charged.

In all cases where extras are wanted, be sure to give us the *number of your Machine.*

Warranty:—That said Machines are capable of cutting and spreading, with one span of horses and driver, from ten to fifteen acres per day of *any kind of grass*, and do it as well as is done with a scythe by the best of mowers.

The price of the Mower, with two sets of knives and extras, is \$110 cash, in Buffalo, delivered on board of boat or cars free of charge.

Office and Shop, corner of Chicago-street and Hamburg canal, near the Eastern R. R. Depot, Buffalo, N. Y.

HOWARD & CO., Manufacturers and Proprietors.

The Mower is also manufactured by **RUGGLES, NOLSE, MASON & Co.,** at Worcester, Mass., for the New England States.

By **SEYMOUR, MORGAN & Co.,** Brockport, N. Y., for Illinois, Iowa and Michigan.

By **WARDER & BROKAW,** Springfield, O., for Ohio and Kentucky.

March 16—w2m, m3t

All orders addressed to **THOMAS HULL,** Albany, *General Agent* for said machine, or left with **J. & G. M. SAYLES,** No. 62 Quay-street, Albany, will be promptly met.

Ketchum's Mowers,

WITH the new improvements, for sale by
LONGETT & GRIFFING,
May 1—m&w 2ms No. 25 Cliff-street, New-York.

Albany Tile Works,

Corner of Patroon and Knox-Streets, Albany, N. Y.

DRAIN TILE of the following descriptions and prices suitable for land drainage, always on hand in large or small quantities of the first quality, delivered at the docks and railroad depots free of cartage:

Horse-Shoe Tile.

4½ inch culiber,\$18 per 1000 feet.
3½ do 15 do
2½ do 12 do

Sole Tile or Pipe.

3 inch culiber,\$18 per 1000 feet.
2 do 12 do

Large Tile for drains about dwellings, yards, &c., of various sizes, \$4 and \$2 per 100 feet. Sole Tile, 4 inch calibre, for sink drains at \$4 per 100 feet. Drain your land and save your crops. Orders from a distance will receive prompt attention.

A. S. BABCOCK.

Albany, April 20, 1854—w&m6m

Appleton & Alderson's Drain Tile Works,

Corner of Lydius and Snipe streets, Albany, near Mr. Wilson's Nursery.

THE subscribers are prepared to furnish Drain Tile of the various and most approved Patterns, at from \$12 to \$18 per 1000 pieces. The Tile are more than 14 inches in length and a larger calibre than any of American manufacture for the same prices. We warrant every Tile to be perfectly sound, to fit good at the joints so as to admit water and keep out the dirt, and to drain Land from 12 to 20 feet on each side of the drain, according to the nature of the soil.

Also, large Tile for small brooks and drains about dwellings, &c. at from \$4 to \$8 per 100 pieces.

Tile delivered at the docks and railroads free of cartage. Specimens can be seen at Messrs. L. & W. MERCHANT'S, 71 Quay-st.

Full directions for laying Tile will be sent free to those addressing the subscribers. Orders are respectfully solicited.

Address, **APPLETON & ALDERSON,**
April 13—w&w&mtf 195 Washington-st, Albany, N. Y.

Langstroth's Movable Comb Bee Hive.

PATENTED Oct. 5th, 1852—Each Comb in the Hive is attached to a separate movable frame, and in less than five minutes they may be all taken out, without cutting or injuring them, or at all endangering the bees. Weak stocks may be quickly strengthened by helping them to honey and maturing brood from stronger ones.

Queenless colonies may be rescued from certain ruin by supplying them with the means of obtaining another queen; and the ravages of the moth effectually prevented, as at any time the hive may be readily examined, and all worms, &c., removed from the combs. New colonies may be formed in less time than is usually required to have a natural swarm, or the hive may be used as a non-swarm, or managed on the common swarming plan.

The surplus honey may be taken from the interior of the hive on the frames or in upper boxes or glasses in the most convenient, beautiful and saleable forms. Colonies may be safely transferred from any other hive to this, at any season of the year, from April to October, as the brood, combs, honey and all the contents of the hive are transferred with them, and securely fastened in the frames.

We are now prepared to sell state, town, county and individual rights, to make, vend and use these hives on reasonable terms. The price for individual rights, which will entitle the purchaser to make the hive for his own use, is five dollars. We can also furnish hives to all who wish. Price from two to five dollars. Upon the receipt of nine dollars we will send the right, together with a beautiful hive, with glass on four sides, showing all the combs. For ten dollars the right and a well made hive which will accommodate two swarms with glass on the back side only. For seven dollars the right and a well made hive without glass, which any one can make who can use the simplest tools.

Agents wanted for the sale of the above rights. To those who can furnish good testimonials of character, qualifications and responsibility, a liberal commission will be paid.

All communications addressed to **J. BEALS, Greenfield, Mass.,** will meet with prompt attention.

For one dollar, postage paid, Langstroth's book entitled the *Hive and Honey Bee*, will be sent free by mail.

J. BEALS,

April 13—w&tm2t Att'y for Rev. L. L. Langstroth.

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Circular saw,	42
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April 20, 1854—w4tm2t

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